

# TEXAS AGRICULTURAL EXPERIMENT STATION

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## PEACH VARIETIES FOR CENTRAL EAST TEXAS

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AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

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This is the first comprehensive survey of the behavior of varieties of peaches in East Texas since the work of W. S. Hotchkiss at the old Troup station, Bulletin No. 208, published in 1917. The present test is a good deal more extensive than the earlier one.

As might be expected, few varieties appear in both lists. Some names, such as Alton, Belle, Carman, Hiley, and Slappey are found in both. Mayflower remains the best May peach, and Elberta retains its leadership for commercial production; but it is now realized that the cold requirements of both varieties are too great for the central eastern part of the State.

Some of the varieties recommended for planting in this area resulted from planned peach breeding, such as Halehaven from the Michigan station, Viceroy and Vedette from the Vineland station in Canada, and Newday, Triogem and Golden East from the New Jersey station. The nurserymen also continue to be active in introducing important new varieties such as Burbank Early July Elberta, Markberta and Stephenson, some of which originated by chance, others by breeding.

The trend is toward early yellow freestones of commercial quality. This permits shipments ahead of the large commercial plantings farther north. No variety can be good enough to produce well without proper care, but the variety situation in East Texas does show definite improvement.

Suggested Peach Varieties for East Texas

Ripening	For home use	For local market	For shipping
May 20-31	Mayflower		
June 1-10	Newday, Sunhigh, Bestmay	Bestmay, Newday, Uneeda, Sunhigh, Early Halehaven	Newday, Sunhigh
June 11-20	Anna, Cumberland, Golden Jubilee, Triogem	Anna, Cumberland, Golden Jubilee, Flaming Gold, Triogem	Triogem
June 21-30	Burbank Early July Elberta, Golden East, Halehaven, Radiance, Veteran, Valiant, Viceroy	Burbank Early July Elberta, Golden East, Halehaven, Radiance, Veteran, Valiant, Viceroy	Burbank Early July Elberta, Golden East, Halehaven, Viceroy
July 1-10	Jack Bell, Honey Special, Redelberta	Golden Elberta Cling, Jack Bell, Redelberta, Vedette	Vedette, Redelberta
July 11-20	Belle, Elberta, Stephenson	Stephenson, Brackett, Elberta, Gold Medal, Markberta	Brackett, Elberta, Gold Medal, Markberta, Stephenson
July 21-31	Frank	Barbara, Chilow, Frank	

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## PEACH VARIETIES FOR CENTRAL EAST TEXAS

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The growing of peaches in East Texas started with the early Spanish colonization. For a long time, most of the trees were grown in home orchard fashion. With comparatively few exceptions, these orchards consisted of seedling trees which were grown and handed down from generation to generation.

During the late 1890's, a land promotion deal was started in this section to utilize the cut-over timberlands for the production of fruit. The venture was profitable in some instances. The expansion reached its peak about 1905. Several factors, such as the lack of accurate information on the planting and care of orchards, widespread infestation of the San Jose scale, and glutted markets due to lack of refrigeration, were primarily responsible for the abandonment of the enterprise on a large scale.

Since that period, the commercial production of peaches in the East Texas area has been considered with some skepticism. Plantings have been pretty much isolated in the Jacksonville, Athens, Troup and Omaha areas. Principal varieties were Hiley for the early crop, and Elberta for the main crop. Some other varieties were grown but these two constituted the main acreage. A rather extensive planting was made in the 1920's of Fair Beauty in the Tyler-Palestine area. A succession of seasons having insufficient cold to complete dormancy for the variety caused many growers, especially around Grapeland, to abandon or top-work the trees to other varieties. These commercial plantings could not supply the fruit requirements of the people in this area. Therefore, for years, the main supply to reach East Texas has been trucked in from other peach producing sections.

Efforts to revive the planting of home orchards were only partially successful. The main reason for this was that nursery budded stock barely survived the fourth growing season. Death of a majority of the trees was primarily due to neglect in carrying out approved cultural, spraying, pruning and thinning practices. In an attempt to find varieties that were better adapted to the climatic and soil conditions of this section, a collection of peach varieties was begun in 1935 at the Nacogdoches Station. The planting first consisted of available varieties of Texas and other Southern States. As the studies progressed, material was added from known sources all over the United States.

### CULTURAL METHODS

The site selected for the test was heavily eroded Nacogdoches soil with a slope of approximately 6 percent. Terraces were constructed with two major purposes in mind: first, to have the terrace tops as nearly 20

feet apart as possible, and second, to allow a drop of approximately 3 percent in the terrace channel. Of course, there were certain deviations from this aim, and it was found necessary to use point terraces, as shown in Figure 2. The trees were planted 20 feet apart along the terrace.

Throughout the period of the test, efforts were made to carry out the approved methods of good orchard cultural practices. In other words, an attempt was made to have each tree produce its fruit under conditions recognized as being desirable for economical fruit production in this section. A cover crop of hairy vetch was planted each fall. Planting was usually in 18-inch drills at the rate of 15 pounds of seed to the acre. Three hundred pounds of 20 percent superphosphate fertilizer was applied in the drill prior to planting the vetch seed. It was found necessary to plow under the cover crop by April in order to reduce the population of green stinkbugs in the orchard. In addition to the use of cover crops, commercial fertilizer of a 1-2-1 ratio was broadcast reasonably close to the trees at the rate of two pounds per one-year old tree. The fertilizer was disked under immediately after being applied. Four pounds of this fertilizer were used the second growing season and the amount increased to six pounds per tree for the third and following seasons.

### EXPERIMENTAL PROCEDURE

Most of the varieties were represented by three trees each, which were planted together. This permitted a close comparison among trees representing the same variety. Several of the varieties have not as yet been grown under commercial orchard conditions in this section. It is realized that a wider test in other locations and in different soil types and fertility might change some of the conclusions reported in this bulletin; and, also, that when grown under commercial acreage the results might be somewhat different.

Each tree in the test was given an identification number, and individual tree data were recorded. During the first growing season the blooms were removed in order to permit the tree to become well established. During the second and following seasons bloom dates were recorded daily. The yield and dates of harvest were obtained every second day. Data to determine the size, appearance, quality, and other essential characters, as shown in Table 3, were taken on 25 fruits from each tree representing its variety. In most instances these records were made during several seasons in order to note the effect of seasonal variation.

As expected, some of the material furnished was not true to variety name. In most cases this was removed as soon as the mistake was discovered. In others instances, trees affected by crown gall, "phoney," or other uncontrollable diseases were removed and their behavior excluded from this report.

The "size of crop," as shown in Table 2, was determined by averaging the yields of the representative trees of each variety over the period of

production. The yields for the first bearing year, 1943, when the crop was almost a failure due to a freeze of 15 degrees on March 3, and for the last bearing season where the trees were injured mechanically or by attacks of insects or diseases, were not included in the average.

The method used to express the "size of crop" was determined after considering the number of varieties that had produced what are normally considered profitable crops in East Texas. Where the yield per tree over the period of production averaged as much as three bushels or more of marketable fruit it was expressed as "very good." An average yield of of two to three bushels per tree was expressed as "good." "Fair" represented an average yield per tree of one to two bushels, while a yield of less than a bushel per tree was considered as "poor."

The data for the column "percent of good crops," as shown in Table 2, were determined by dividing the number of years the variety produced yields of two or more bushels of marketable fruit per tree by the number of years it was in production, as explained for the method of determining the "size of crop."

The prolificacy of a variety was determined by the amount of fruit on the tree at the time of thinning. With this method, a variety might be prolific yet show low yields of marketable fruit, which might be due to any one of the following reasons: preharvest injury by insects or diseases, failure to size after thinning, and to an extremely late ripening season. There are a number of late varieties which are prolific and produce a heavy yield of fruit, but due to injury by the oriental fruit moth, the recorded yields of marketable fruit are usually in the "poor" bracket. The results of this test indicate that fruit of the varieties ripening after the Elberta season is apt to be heavily infested with larva of this insect. These varieties will not ordinarily be desirable for commercial plantings in East Texas until a satisfactory control method has been worked out for the oriental fruit moth.

The effect of a minimum temperature of 15 degrees on March 3, 1943, on the different varieties was observed. The effects of the low temperature that year were considered the most disastrous of any recorded during the 10-year period. There was a rather warm period prior to March 3, and a large portion of the fruit buds had advanced to the "pop corn" stage. Examination of fruit buds the morning after the minimum of 15 degrees showed ice in the bud regardless of its development. The yields for 1943 were not included in this report. During the period of the test, late spring frosts occurred during 1937, 1940, 1942 and 1944, in addition to the freeze for 1943. In Table 1, yields during seasons with and without a late spring frost are available for comparison. In some instances, varieties such as Carrie and Dr. Burton have a higher average yield during the years with late frosts than for the period of normal frosts. This differential is due to low yields occurring during the period without a late frost as a result of considerable wood removal following heavy infestation of the San Jose scale. Since the data are not applicable in a consideration



Table 1. Effect of Late Frosts and Cold on Yield of Selected Varieties (Pounds Per Tree)

Variety	Yield After Late Frost				Yield Without Late Frost					Effect of Late Frost on Yield*
	1940	1942	1944	Av.	1939	1941	1945	1946	Av.	
Date of last killing frost.....	4/13	4/1	3/30	.....	2/23	3/11	2/23	2/15	.....	.....
Alton.....			62.1	62.1			99.0	125.7	112.4	55.2
Anna.....	35.2	181.7	170.3	129.0		104.6	261.9		183.2	70.4
Annabel.....		24.5	94.5	59.5		22.0	75.7	89.6	62.4	95.4
Arp Beauty.....	84.3	195.6	37.5	105.8		162.5			162.5	65.1
Babcock.....		36.2	121.2	78.7			84.9	122.1	103.5	76.0
Banner.....		57.2	28.8	43.0		37.0	171.1	45.8	84.6	50.8
Belle.....		37.2	79.5	58.4			172.0	190.9	181.4	32.2
Bestmay.....			126.5	126.5			164.6	168.3	166.4	76.0
Big Red.....		63.3	35.3	49.3		59.9	297.4		178.6	27.6
Brackett.....		99.2	83.1	91.2		74.6	161.4	309.4	181.8	50.2
Burbank Early July Elberta..		53.6	146.8	100.2			236.7	102.9	169.8	59.0
Burbank Giant Freestone.....		90.8	40.4	65.6		20.3	79.2	102.5	67.3	97.5
Canadian Queen.....	34.7	79.4	24.0	46.0		29.2	67.8	175.3	90.8	50.7
Chief.....			17.9	17.9			64.8	28.0	46.4	38.6
Crawford Early Improved.....	42.7	87.9	120.6	83.7		66.0	99.0	206.3	123.8	67.6
Cumberland.....	13.9	146.7	79.9	80.2		158.2	127.5		142.8	56.2
Early Rose.....	33.0	192.6	85.6	103.7	125.4	219.4			172.4	60.2
Elberta.....	87.6	99.9	120.5	102.7		112.3	206.0	381.9	233.4	44.0
Fair Beauty.....			23.3	23.3			113.3	132.1	122.7	19.1
Fisher.....		86.8	30.7	58.8			91.3	58.2	74.8	78.6
Frank.....	55.1	42.6	86.7	61.5	80.1	17.7	126.0	174.5	99.6	61.7
Globe Haven.....		165.4	54.1	109.7		**	67.7	261.0	164.4	66.7
Golden East.....			82.4	82.4			194.9	124.6	159.7	51.6
Golden Jubilee.....	26.3	136.4	150.1	104.3		146.8			146.8	71.0
Gold Medal.....		104.7	107.2	105.9		69.9	197.7	106.2	124.6	85.0
Halberta.....	38.0	65.9	7.4	37.1		45.9			45.9	80.8
Halehaven.....	56.2	124.1	49.2	76.5		**	178.4	185.3	181.8	42.1
Hiley.....		27.4	77.9	52.6			135.8	112.9	124.4	42.3
Hobson.....	80.0	152.1	142.7	124.9		74.3	235.5	132.8	147.5	84.7
Honey Special.....			74.6	74.6			21.9	†		
Jack Bell.....		127.4	67.3	97.4		52.7	78.4	240.7	123.9	78.6
July Gold.....		83.2	132.5	107.8			155.7		155.7	69.2
June Elberta.....	14.1	93.3	54.9	54.1		**	26.4	156.2	91.3	59.2
Kalhaven.....		54.6	100.8	77.7			164.4	150.0	157.2	49.4
Leona.....	31.5	113.6	11.2	52.1		42.0	153.8		97.9	53.7
Mamie Ross.....			110.6	110.6			143.1	122.8	133.0	83.2
Markberta.....		78.6	74.1	76.4		55.8	144.5	68.1	89.5	85.4
Mayflower.....	30.3			30.3	75.1	61.5			68.3	44.4
Minnie Stanford.....	54.9	48.5	19.0	40.8		13.0	24.0	90.0	42.6	95.8
Montopolis.....		77.2	122.4	99.8			181.8	191.6	186.7	53.5
Oriole.....		129.1	22.2	75.6		75.7	84.0	173.8	111.2	68.1
Primrose.....		135.1	105.9	120.5		96.2	106.4	190.2	130.9	92.1
Radiance.....		180.6	168.1	174.4		94.2	240.6	192.9	175.9	99.1
Redelberta.....		65.2	74.9	70.0		45.7	327.6	121.5	164.9	42.4
Rio Oso Gem.....	44.2	46.6	34.0	41.6		47.1	93.4		70.2	59.3
Rochester.....	29.8	95.6	68.3	64.6		**	154.9	109.1	132.0	48.9
Shovt.....		78.8	33.5	56.2		74.4	121.2		97.8	57.5
South Haven.....		121.9	3.2	62.5		44.5	107.2	185.6	112.4	55.6
Stark Early Elberta.....		137.4	68.7	103.0		**	88.1	255.5	171.8	60.1
Sunglow.....			8.4	8.4			80.9	54.0	67.4	12.5
Triogem.....			28.6	28.6			97.0	157.9	127.4	22.4
Uneeda.....	41.5	150.5	258.8	150.2	132.9	209.2	131.9	326.1	200.0	75.1
Vedette.....		147.9	89.6	118.8			68.6	167.2	141.4	94.5
Veteran.....		149.7	87.0	118.3			83.8	143.0	137.1	97.5
Viceroy.....		135.2	147.8	141.5			68.8	229.4	198.3	85.5
Viola.....		57.0	16.0	36.5		43.6	99.0		71.3	51.2

\*Percentage of average yield during years of late frost as compared with average yield of years with normal frost dates.

\*\*Used for breeding work.

†Heavy yields but fruit not harvested.

of the effect of late frost they are not included. Yields during years having late frosts ranged from 12.5 to 99.1 percent of the yields for years without late frosts. These figures are reliable only within limits, but do indicate differences in ability to produce in spite of the frost hazard.

During the entire test, records were kept of the number of hours at 45 degrees or less that occurred from October through the following February. With the exception of the 1940-41 season, there were sufficient hours of cold to permit normal development for the Elberta variety. This increased the size of the percentage given in the last column of Table 1 for some varieties, for example Minnie Stanford.

Table 2. Performance of Peach Varieties at Nacogdoches, 1935-46

Variety	Flowers		Av. bloom date		Av. harv. date		No. of days *	Year planted	First bearing season	No. of years fruiting	Size of crop **	Percent of good crops	Notes
	Size	Abundance	First	Full	First	Last							
A. A. Schilling..	large	many	3/6	3/17	6/6	6/16	81	1938	1941	4	good	100	Prolific; requires thinning.
Admiral Dewey..	large	many	3/9	3/19	6/9	6/18	82	1938	1941	4	good	50	Prolific; color dull; not popular.
Afterglow.....	medium	medium	2/24	3/3	7/18	7/27	137	1941	1944	2	fair	0	Elberta season.
Alexander.....	large	medium	3/13	3/23	5/21	5x27	59	1938	1939	5	poor	0	High cold requirement.
Alton.....	large	many	3/8	3/16	6/13	7/4	89	1940	1942	3	fair	33	Radiance season, which is preferable.
Anna.....	large	many	3/3	3/14	6/14	6/27	92	1936	1939	5	very good	80	Prolific; consistent bearer.
Annabel.....	large	medium	3/4	3/14	7/18	7/27	126	1938	1940	5	fair	0	.....
Ansenne***.....	large	many	3/5	3/14	7/9	7/16	117	1938	1941	4	fair	0	Prolific; brown rot can be controlled.
Arp.....	large	medium	3/8	3/21	6/22	6/30	93	1935	1939	4	good	50	Not popular on local markets.
Augbert.....	small	few	3/4	3/14	8/14	8/23	153	1936	1939	2	poor	0	Too late for this section.
Babcock.....	large	many	2/9	3/3	6/27	7/6	116	1939	1941	4	fair	50	Very prolific; heavy loss from brown rot.
Banner.....	small	many	3/6	3/14	7/31	8/8	139	1938	1940	5	fair	20	Severe loss from oriental fruit moth.
Barbara.....	small	medium	3/2	3/13	8/2	8/12	142	1936	1939	4	fair	25	Prolific; heavy loss from oriental fruit moth.
Beauty.....	small	medium	3/11	3/22	6/19	6/29	89	1940	1942	1	poor	0	.....
Belle.....	medium	many	3/5	3/16	7/11	7/21	117	1940	1941	3	very good	67	.....
Bernard Early..	small	medium	3/3	3/12	7/31	8/4	141	1939	1941	4	fair	25	Severe loss from oriental fruit moth.
Bestmay.....	large	many	3/4	3/15	6/2	6/12	79	1940	1942	3	very good	100	Consistent production.
Best White.....	small	many	2/23	3/8	7/27	7/31	141	1939	1941	3	fair	33	Too late for this section.
Big Red.....	small	medium	3/6	3/15	7/16	7/23	123	1938	1940	4	good	25	Fruit sizes well.
Billmeyer.....	small	medium	3/9	3/18	7/18	7/27	122	1938	1940	5	fair	20	Very prolific; fruit does not size well; heavy loss from brown rot.
Brackett.....	small	medium	3/2	3/13	7/15	7/26	125	1937	1939	6	good	33	Prolific; fruit sizes well.
Burbank Early	small	many	3/3	3/12	6/20	7/3	104	1939	1941	4	good	75	Said by some to be too prolific.
July Elberta..													
Burbank Giant	small	few	3/6	3/16	7/5	7/15	111	1938	1940	5	fair	20	.....
Freestone....													
Burbank July	small	medium	3/7	3/19	6/24	7/4	87	1937	1939	4	fair	25	Prolific.
Gold.....													
Canadian Queen	large	few	3/7	3/17	7/12	7/23	118	1938	1940	5	fair	20	.....
Candoka.....	small	few	3/9	3/17	7/28	7/28	133	1938	1940	1	poor	0	Is not adapted to this section.



Carman.....	large	medium	3/7	3/18	6/24	7/4	98	1935	1938	5	good	60	Prolific; fruit sizes well.
Carrie.....	small	many	2/19	3/4	8/4	8/13	153	1936	1938	7	fair	14	Very prolific; severe damage from oriental fruit moth and scab.
Charlotte.....	small	few	3/3	3/13	7/21	7/26	130	1938	1941	2	poor	0	High cold requirement.
Chief.....	large	medium	3/14	3/24	7/22	7/27	120	1939	1942	4	fair	62	Fruit sizes well.
Chilow.....	large	many	3/2	3/11	7/22	7/29	133	1938	1940	5	fair	40	Prolific; fruit does not size well.
Cole Golden....	large	medium	2/24	3/4	7/9	7/19	127	1941	1944	2	good	50	Prolific.
Crawford Early													
Improved.....	small	many	3/4	3/14	7/18	7/25	126	1937	1939	6	good	33	Prolific.
Colora.....	large	medium	3/11	3/22	7/3	7/14	103	1938	1940	5	fair	20	Consistent production of fair crops.
Cumberland....	large	medium	3/1	3/15	6/17	6/26	94	1937	1939	5	good	60	Prolific; fruit sizes well.
C. W. Cartwright	large	many	3/10	3/17	6/2	6/11	77	1938	1941	4	fair	50	.....
Dalton.....	large	many	3/11	3/19	6/21	6/30	94	1939	1941	4	fair	50	Inconsistent production.
Decker.....	small	few	3/7	3/17	7/1	7/7	106	1938	1941	1	poor	0	Not adapted to this section.
Delicious.....	medium	many	3/7	3/14	6/20	6/25	98	1938	1940	5	fair	40	.....
Dillion Creek...	large	medium	3/5	3/14	6/21	6/28	99	1939	1941	4	good	50	Other white varieties preferable.
Dr. Burton.....	large	many	3/7	3/17	6/24	7/5	99	1936	1939	6	good	50	Very prolific; Radiance preferred.
Dr. Doty's Elberta	small	medium	3/5	3/15	6/14	6/24	91	1938	1940	5	good	80	Consistent production.
Duss Turner....	large	medium	3/7	3/18	6/14	6/25	88	1939	1943	1	poor	0	.....
Early Halehaven	small	medium	2/25	3/8	6/9	6/20	93	1941	1944	2	very good	100	Two weeks earlier than Halehaven.
Early Elberta...	small	medium	3/6	3/15	6/28	7/8	105	1937	1940	5	good	40	Prolific; requires heavy thinning.
Early Imperial..	small	medium	2/25	3/8	6/16	6/22	100	1939	1941	4	fair	50	.....
Early Queen....	small	medium	3/4	3/13	6/17	7/2	96	1938	1940	5	good	100	A very consistent producer.
Early Rose.....	large	many	3/8	3/20	6/9	6/17	81	1935	1938	6	good	50	Prolific; requires heavy thinning.
Early Wheeler..	large	few	3/9	3/20	6/3	6/10	75	1936	1939	4	poor	0	Yield unsatisfactory.
Eclipse.....	large	many	3/4	3/13	6/21	7/4	100	1937	1939	6	fair	17	Prolific; fails to size when thinned.
E. H. Hendon...	small	medium	3/5	3/12	8/9	8/13	150	1938	1941	3	poor	0	Too late for this section.
Elberta.....	small	medium	3/2	3/12	7/17	7/27	127	1935	1939	6	very good	67	Consistency and yield very satisfactory.
Elberta Cling...	large	many...	3/3	3/11	7/21	7/28	132	1938	1940	5	fair	20	Prolific; susceptible to brown rot.
Elberta Late....	small	medium	3/4	3/15	7/17	7/24	124	1939	1941	4	fair	25	.....
Elberta Supreme	small	medium	3/4	3/15	7/14	7/22	121	1939	1941	4	fair	25	.....
El Cling.....	large	many	3/11	3/20	Sept. 1 to	Nov.	192	1938	1941	2	poor	0	.....
Engle.....	small	medium	3/10	3/21	7/20	7/25	121	1938	1940	5	poor	0	Fruit does not size when properly thinned.
Erly-Red-Fre...	medium	medium	3/1	3/9	5/26	6/4	78	1941	1944	2	fair	0	.....
Fair Beauty....	small	medium	3/12	3/22	6/19	7/1	89	1940	1942	3	fair	67	High cold requirement limits use here.
Fay Elberta....	small	medium	2/23	3/3	7/7	7/17	126	1941	1944	2	good	100	.....

\*Full bloom to first harvest. \*\*Average over entire period. \*\*\*Nectarine.

Table 2. Performance of Peach Varieties at Nacogdoches, 1935-46—Continued

Variety	Flowers		Av. bloom date		Av. harv. date		No. of days *	Year planted	First bearing season	No. of years fruiting	Size of crop **	Percent of good crops	Notes
	Size	Abundance	First	Full	First	Last							
Fertile Hale . . .	small	medium	2/24	3/5	7/10	7/18	127	1941	1944	2	fair	0	Shy producer like most J. H. Hale's.
Fireball . . . . .	large	many	3/7	3/15	6/5	6/13	82	1940	1942	3	fair	33	Heavy fruit loss from brown rot.
Fisher . . . . .	small	medium	3/8	3/17	6/8	6/16	84	1938	1941	4	fair	0	Shy producer.
Flaming Gold . . .	large	medium	2/23	3/2	6/19	6/30	109	1941	1944	2	fair	50	
Flatonia . . . . .	large	many	3/3	3/14	6/20	7/1	98	1939	1941	4	very good	75	Prolific; yet fruit sizes well.
Florence . . . . .	large	medium	3/3	3/20	5/26	5/30	67	1938	1941	4	poor	0	Similar to Mayflower.
Frank . . . . .	small	medium	2/24	3/8	7/29	8/6	143	1935	1938	7	fair	28	Very prolific, fruit size well when thinned.
Frankie . . . . .	medium	medium	3/4	3/13	8/1	8/10	141	1939	1941	2	poor	0	Frank preferable, heavy loss from oriental fruit moth.
Fredericka . . . .	small	medium	3/6	3/14	8/9	8/16	148	1936	1939	4	poor	0	Prolific, late, heavy loss from oriental fruit moth.
Gage Elberta . . .	small	medium	3/4	3/14	7/18	7/27	126	1938	1940	4	fair	25	Prolific, not consistent in production.
General Lee . . .	large	medium	3/4	3/14	7/19	7/28	127	1937	1940	1	fair	0	Very productive, heavy loss from brown rot.
Geo. Harris													
Indian Squaw . .	large	few	3/10	3/20	7/24	7/28	126	1939	1942	3	fair	0	
Globe Haven . . .	small	few	3/5	3/14	6/23	7/5	101	1938	1940	4	good	50	Not as productive as Hale-haven—same season.
Golden Beauty . .	small	medium	3/5	3/16	6/22	7/1	98	1939	1941	4	fair	50	Yield not too consistent; popular locally.
Golden Elberta													
Cling . . . . .	large	medium	2/28	3/7	7/8	7/17	123	1941	1944	2	fair	50	
Golden Dreaa . .	small	many	3/6	3/18	7/22	7/30	127	1939	1941	4	fair	25	Other white varieties more desirable.
Golden East . . .	large	medium	3/10	3/17	6/28	7/7	103	1940	1942	3	good	67	Prolific.
Golden Gem . . .	small	medium	3/11	3/20	8/10	8/13	143	1936	1939	1	poor	0	Prolific, too late for this section.
Golden Globe . . .	small	few	2/28	3/5	6/6	6/16	93	1941	1945	1	fair	0	High cold requirement.
Golden Jubilee . .	small	medium	3/4	3/13	6/15	6/26	94	1936	1939	4	good	75	Prolific; tip tender.
Gold Drop . . . .	large	medium	3/8	3/21	7/30	8/8	131	1938	1940	4	poor	0	Prolific; too late for this section.
Gold Dust . . . .	small	medium	3/8	3/17	8/9	8/18	145	1939	1941	3	poor	0	Too late for this section.
Gold Medal . . . .	large	medium	3/2	3/13	7/12	7/23	121	1938	1940	5	good	80	A good yellow freestone to yield Elberta season.
Gold Standard . .	small	medium	2/25	3/5	7/10	7/18	127	1941	1944	2	fair	50	Slow to come into bearing.
Governor Hogg . .	large	few	3/8	3/18	6/27	7/3	101	1937	1940	3	poor	0	Not prolific.
Governor													
Lanham . . . . .	small	medium	3/2	3/11	7/14	7/25	125	1938	1940	5	poor	0	

Griffith Cling...	small	few	2/25	3/4	7/3	7/10	121	1941	1945	1	poor	0	Slow to come into bearing.
Halate.....	small	few	3/7	3/16	7/28	7/29	134	1938	1941	3	poor	0	
Halberta.....	small	few	3/5	3/14	7/20	7/27	128	1937	1939	4	poor	0	Has not been consistent in production at station.
Halehaven.....	small	many	3/3	3/11	6/22	7/6	103	1938	1940	5	good	60	Prolific, fruit sizes well, excellent early yellow.
Hale Early.....	large	medium	3/3	3/11	6/9	6/16	90	1941	1944	2	fair	0	Prolific, slow to come into bearing.
Hall (Hall's Yellow).....	large	many	1/22	2/14	7/12	7/15	148	1941	1944	2	poor	0	Has low cold requirement.
Hardee.....	large	few	3/12	3/20	7/22	7/27	124	1938	1940	3	poor	0	Has high cold requirement.
Hardyberta.....	small	few	3/8	3/17	7/22	7/27	127	1939	1941	3	poor	0	Very poor production.
Hart Cling.....	large	medium	3/1	3/13	7/27	8/3	136	1938	1941	2	poor	0	Prolific, heavy damage from oriental fruit moth, too late for this section.
Hazel.....	small	medium	3/6	3/17	7/18	7/25	123	1938	1940	3	poor	0	
Heath Cling....	small	few	3/6	3/19	8/18	8/21	152	1939	1942	2	poor	0	Entirely too late for this section.
Heidelberg.....	small	many	3/10	3/19	7/11	7/20	114	1938	1941	4	fair	50	Prolific.
Henderson Elberta Cling...	small	medium	2/25	3/8	7/23	8/2	137	1935	1938	6	fair	17	Slightly earlier than Frank.
Henrietta.....	small	few	3/9	3/20	7/31	8/5	134	1939	1941	4	poor	0	Slow to come into bearing.
Hiley.....	large	many	3/2	3/13	6/27	7/8	107	1940	1941	4	fair	50	Prolific, many yellow varieties available at this season.
Hiley Belle.....	large	many	3/4	3/18	6/30	7/13	104	1936	1939	3	good	67	Prolific.
Hobson.....	large	many	2/26	3/10	6/26	7/7	107	1937	1939	6	good	67	Prolific, a heavy bearer.
Honey Special...	large	many	3/3	3/12	7/5	7/13	115	1940	1942	2	poor	0	Prolific, bears early.
Hope Farm.....	small	medium	3/7	3/15	7/20	7/29	128	1938	1940	5	good	60	Not too prolific, heavy yield from large fruit.
Hoy.....	small	medium	3/3	3/12	7/11	7/18	118	1939	1941	3	poor	0	A shy bearer.
Ideal.....	large	medium	3/12	3/22	6/30	7/14	99	1938	1941	4	fair	25	High cold requirement.
Illinois.....	small	many	3/7	3/19	7/5	7/15	108	1939	1941	3	very good	67	Shy bearer.
Improved Elberta.....	small	few	3/6	3/17	7/16	7/25	123	1940	1942	3	fair	33	Prolific, requires heavy thinning.
Improved Victor	small	medium	3/4	3/14	6/20	7/1	99	1936	1939	6	fair	33	Shy bearer in this section.
Jack Bell.....	small	medium	3/6	3/15	7/6	7/17	113	1938	1940	5	good	40	Prolific, fruit sizes well.
Jackson Elberta...	small	medium	3/6	3/15	7/15	7/25	121	1935	1939	4	fair	25	Prolific, heavy bearer.
July Gold.....	small	many	2/27	3/12	6/21	7/3	103	1939	1941	3	good	67	Shy bearer, fruit does not size well.
June Elberta....	small	many	3/9	3/14	5/30	6/6	77	1937	1939	5	fair	20	Very prolific, heavy bearer some seasons.
June Wax.....	small	many	3/11	3/21	6/24	7/4	98	1938	1941	4	fair	25	Shy bearer, inconsistent in yields.
J. H. Hale.....	small	few	3/5	3/14	7/20	7/28	128	1935	1938	6	fair	33	Prolific, erratic in bearing.
Kalamazoo.....	small	many	3/6	3/16	7/9	7/21	116	1939	1941	4	good	75	Several J. H. Hale strains tested, none heavy bearers.
Kalhaven.....	small	many	3/6	3/16	7/10	7/23	116	1939	1941	4	good	75	Very prolific, heavy bearer.
													Prolific, heavy bearer.

\*Full bloom to first harvest. \*\*Average over entire period.

Table 2. Performance of Peach Varieties at Nacogdoches, 1935-46—Continued

Variety	Flowers		Av. bloom date		Av. harv. date		No. of days *	Year planted	First bearing season	No. of years fruiting	Size of crop **	Percent of good crops	Notes
	Size	Abundance	First	Full	First	Last							
Katie.....	small	few	3/8	3/17	8/10	8/17	146	1936	1939	5	poor	0	Very shy bearer.
Kent.....	small	medium	3/5	3/12	7/17	7/23	128	1938	1940	4	fair	25	Low but consistent yielder.
Krummel.....	small	medium	3/10	3/21	8/2	8/8	135	1937	1939	6	poor	0	Shy bearer, too late for this section.
(October)													
Lagrange.....	small	medium	3/3	3/12	7/13	7/23	124	1939	1941	4	poor	0	Shy bearer.
Late Elberta	small	medium	3/5	3/13	7/28	8/8	138	1939	1941	4	fair	25	Slow to come into heavy bearing, inconsistent yield.
Rex													
Lela Dudley....	small	few	3/1	3/8	7/7	7/15	122	1941	1945	1	poor	0	Slow to come to bearing. Low yielder.
Lemon Cling....	large	many	3/5	3/18	7/31	8/6	133	1939	1941	4	fair	25	Prolific, but inconsistent in production.
Lemon Free....	large	medium	3/5	3/17	7/31	8/13	136	1939	1942	2	poor	0	Slow to come into bearing. Low yielder.
Leona.....	small	many	2/27	3/10	7/10	7/18	122	1937	1939	5	fair	40	Prolific, but inconsistent in bearing heavy crops.
Liberty.....	small	medium	3/6	3/17	8/10	8/18	146	1937	1939	2	poor	0	Shy bearer, too late for this section.
Livingston													
Beauty.....	large	medium	2/25	3/4	7/7	7/18	129	1941	1944	2	fair	50	Prolific.
Lockwood.....	small	few	3/7	3/15	6/25	7/2	103	1938	1940	5	poor	0	Shy bearer, inconsistent in production.
Luttichau.....	large	medium	3/7	3/17	6/28	7/6	102	1937	1938	3	poor	0	Prolific, but inconsistent in production.
L. C. Patterson..	large	many	3/9	3/17	6/14	6/20	90	1938	1940	5	fair	20	Prolific, heavy loss from brown rot.
Mamie Ross....	large	many	3/8	3/15	6/18	7/4	96	1940	1942	3	good	100	Prolific, consistent bearer, severe loss from brown rot.
Marigold.....	large	medium	3/13	3/23	6/5	6/8	75	1938	1941	3	poor	0	Shy bearer, trees tender to winter injury.
Markberta.....	small	medium	3/5	3/14	7/13	7/24	121	1938	1940	5	fair	20	Prolific, heavy bearer some seasons.
Mark-Late.....	small	medium	3/5	3/13	7/15	7/26	125	1938	1940	4	fair	0	Fruit sizes well.
Markham Cling..	large	medium	3/4	3/14	7/18	7/24	127	1938	1940	4	fair	25	.....
Markham Jewel..	large	medium	3/2	3/13	7/18	7/29	127	1938	1940	4	fair	0	.....
Mary Woodbury	small	few	3/6	3/17	7/14	7/21	117	1939	1941	4	poor	25	A very shy bearer, not consistent in production.
Mayflower.....	large	medium	3/12	3/22	5/24	6/2	63	1935	1937	3	fair	33	Very prolific some seasons, inconsistent in yield.
McDaniel June..	large	medium	2/26	3/6	6/8	6/18	97	1941	1944	2	fair	0	Sizes well.
McDaniel May..	large	medium	2/28	3/8	5/15	5/21	74	1941	1944	2	fair	0	Promises to be prolific some years.

McDevitt.....	small	few	3/5	3/13	7/29	8/2	138	1938	1941	2	poor	0	No production, too late for this section.
McKevitt.....	small	few	3/7	3/18	8/4	8/6	139	1938	1942	3	poor	0	No production, too late for this section.
Mikado.....	small	medium	3/5	3/13	7/13	7/23	122	1938	1940	5	good	40	Prolific, heavy yielder some seasons.
Minnie Stanford	small	few	3/7	3/15	7/21	7/28	130	1936	1939	6	poor	0	A shy bearer.
Moneymaker	small	medium	3/3	3/11	8/16	8/20	157	1936	1939	5	poor	20	Inconsistent bearer, prolific some years, very late.
Montopolis.....	large	many	3/2	3/11	7/9	7/18	122	1939	1941	4	good	75	Prolific and consistent bearer, overshadowed by yellow freestone.
Moore Elberta..	small	medium	3/3	3/15	7/8	7/26	128	1939	1941	3	poor	0	Yield not up to Elberta.
Mountain Rose.	large	medium	3/9	3/21	5/18	5/25	69	1939	1941	4	fair	0	Yields are inconsistent in production, prolific some years.
Muir.....	small	few	3/10	3/17	7/19	7/23	122	1938	1940	3	poor	0	Not satisfactory in East Texas.
Newday.....	small	many	2/22	3/1	6/3	6/16	94	1941	1944	2	good	50	A heavy early bearer, prolific.
New Honey Dew	small	medium	3/11	3/20	7/9	7/21	111	1938	1940	5	good	60	A heavy bearer, excellent white for home orchard.
New Prolific....	small	medium	3/7	3/16	7/12	7/19	120	1939	1941	4	fair	25	Inconsistent and rather shy bearer.
October Beauty.	small	medium	3/8	3/17	8/12	8/17	150	1938	1940	5	poor	0	Prolific, but ripens too late for satisfactory yields.
Olle.....	large	many	2/27	3/12	6/5	6/12	86	1939	1941	4	good	50	Prolific, not popular on local markets.
Oklaberta.....	small	few	3/6	3/15	7/15	7/23	118	1940	1944	2	poor	0	Slow to come into bearing; low yields.
Orange Cling....	small	medium	3/4	3/15	7/14	7/20	123	1938	1940	5	fair	20	Prolific.
Oriole.....	small	medium	3/10	3/21	6/12	6/21	84	1938	1940	5	fair	40	Very prolific some years.
Pallas.....	large	many	2/28	3/7	7/19	7/21	133	1936	1939	2	poor	0	Prolific, but low yields due to brown rot loss.
Payne Beauty...	large	medium	2/27	3/8	7/5	7/16	127	1941	1944	2	good	50	Trees variable in productivity, inclined to be prolific.
Phillips Cling...	small	few	3/6	3/17	8/1	8/4	137	1939	1942	1	poor	0	Poor and inconsistent bearer; too late for this section.
Pioneer.....	small	many	3/9	3/18	6/15	6/24	89	1938	1940	4	good	50	Prolific, fairly consistent in heavy production.
Polly.....	small	medium	3/10	3/22	7/5	7/16	109	1938	1941	4	fair	0	Shy bearer, Montopolis is preferable.
Primrose.....	small	medium	3/5	3/15	7/10	7/20	118	1937	1940	5	good	80	A heavy consistent bearer.
Radiance.....	large	many	3/3	3/14	6/21	7/1	99	1937	1940	5	very good	80	Very prolific, fruit sizes well, good white freestone.
Raritan Rose...	small	many	3/2	3/11	6/6	6/16	89	1941	1944	2	good	100	A prolific heavy bearer.
Rater No. 1....	small	medium	3/11	3/22	6/25	7/2	95	1939	1941	2	poor	0	Prolific some years.

\*Full bloom to first harvest. \*\*Average over entire period.



Table 2. Performance of Peach Varieties at Nacogdoches, 1935-46—Continued

Variety	Flowers		Av. bloom date		Av. harv. date		No. of days *	Year planted	First bearing season	No. of years fruiting	Size of crop **	Percent of good crops	Notes
	Size	Abundance	First	Full	First	Last							
Katie.....	small	few	3/8	3/17	8/10	8/17	146	1936	1939	5	poor	0	Very shy bearer.
Kent.....	small	medium	3/5	3/12	7/17	7/23	128	1938	1940	4	fair	25	Low but consistent yielder.
Krummel.....	small	medium	3/10	3/21	8/2	8/8	135	1937	1939	6	poor	0	Shy bearer, too late for this section.
Lagrange.....	small	medium	3/3	3/12	7/13	7/23	124	1939	1941	4	poor	0	Shy bearer.
Late Elberta Rex	small	medium	3/5	3/13	7/28	8/8	138	1939	1941	4	fair	25	Slow to come into heavy bearing, inconsistent yield.
Lela Dudley....	small	few	3/1	3/8	7/7	7/15	122	1941	1945	1	poor	0	Slow to come to bearing.
Lemon Cling....	large	many	3/5	3/18	7/31	8/6	133	1939	1941	4	fair	25	Low yielder.
Lemon Free....	large	medium	3/5	3/17	7/31	8/13	136	1939	1942	2	poor	0	Prolific, but inconsistent in production.
Leona.....	small	many	2/27	3/10	7/10	7/18	122	1937	1939	5	fair	40	Slow to come into bearing.
Liberty.....	small	medium	3/6	3/17	8/10	8/18	146	1937	1939	2	poor	0	Low yielder.
Livingston Beauty.....	large	medium	2/25	3/4	7/7	7/18	129	1941	1944	2	fair	50	Prolific, but inconsistent in bearing heavy crops.
Lockwood.....	small	few	3/7	3/15	6/25	7/2	103	1938	1940	5	poor	0	Shy bearer, too late for this section.
Luttichau.....	large	medium	3/7	3/17	6/28	7/6	102	1937	1938	3	poor	0	Prolific.
L. C. Patterson..	large	many	3/9	3/17	6/14	6/20	90	1938	1940	5	fair	20	Shy bearer, inconsistent in production.
Mamie Ross....	large	many	3/8	3/15	6/18	7/4	96	1940	1942	3	good	100	Prolific, but inconsistent in production.
Marigold.....	large	medium	3/13	3/23	6/5	6/8	75	1938	1941	3	poor	0	Prolific, heavy loss from brown rot.
Markberta.....	small	medium	3/5	3/14	7/13	7/24	121	1938	1940	5	fair	20	Prolific, consistent bearer, severe loss from brown rot.
Mark-Late.....	small	medium	3/5	3/13	7/15	7/26	125	1938	1940	4	fair	0	Shy bearer, trees tender to winter injury.
Markham Cling..	large	medium	3/4	3/14	7/18	7/24	127	1938	1940	4	fair	25	Prolific, heavy bearer some seasons.
Markham Jewel..	large	medium	3/2	3/13	7/18	7/29	127	1938	1940	4	fair	0	Fruit sizes well.
Mary Woodbury	small	few	3/6	3/17	7/14	7/21	117	1939	1941	4	poor	25	.....
Mayflower.....	large	medium	3/12	3/22	5/24	6/2	63	1935	1937	3	fair	33	.....
McDaniel June..	large	medium	2/26	3/6	6/8	6/18	97	1941	1944	2	fair	0	A very shy bearer, not consistent in production.
McDaniel May..	large	medium	2/28	3/8	5/15	5/21	74	1941	1944	2	fair	0	Very prolific some seasons, inconsistent in yield.
													Sizes well.
													Promises to be prolific some years.

Stump.....	small	medium	3/7	3/15	7/17	7/28	125	1938	1940	5	fair	0	.....
Summercrest.....	small	medium	2/25	3/3	7/1	7/11	117	1941	1944	2	fair	0	.....
Sunbeam.....	small	many	3/6	3/18	6/13	6/22	86	1938	1940	4	fair	25	Prolific, responds to thin-
Sungold.....	small	medium	2/28	3/13	7/12	7/25	123	1938	1940	5	fair	80	.....
Sunhigh.....	large	medium	2/22	3/2	6/6	6/19	96	1941	1944	2	good	100	Comes into bearing early,
Surprise.....	large...	many...	3/11	3/17	Oct.	Nov.	197	1940	1944	2	poor	0	productive.
Sunglow.....	medium	medium	3/5	3/13	8/1	8/7	153	1940	1942	3	poor	0	Sets heavy crop, but no
Tena.....	small	medium	3/7	3/16	7/22	8/2	123	1935	1938	4	fair	25	yields due to lateness.
Texaberta.....	small	medium	3/4	3/14	7/7	7/15	117	1939	1941	2	fair	0	Prolific, too late for this
Texas King.....	large	many	3/7	3/15	6/28	7/8	106	1938	1940	3	fair	0	section.
Triumph.....	large	many	3/17	3/26	6/14	6/19	89	1939	1941	3	fair	33	Consistent in yields of fair
Triogem.....	small	medium	3/4	3/13	6/14	6/23	93	1940	1942	3	fair	33	crops.
Tuscan Cling...	small	medium	3/9	3/20	7/9	7/12	113	1938	1941	4	poor	0	Prolific some seasons.
Uneeda.....	large	medium	3/3	3/13	6/1	6/9	80	1935	1937	8	very good	75	Production inconsistent and
Upshur County..	small	medium	2/16	2/24	7/2	7/14	128	1941	1944	1	fair	0	rather shy.
Valiant.....	small	many	3/7	3/14	6/28	7/7	106	1938	1940	5	good	60	Prolific, yields light due to
Vedette.....	large	medium	3/9	3/18	7/1	7/11	105	1938	1940	5	good	60	brown rot.
Veteran.....	small	medium	3/7	3/15	6/27	7/10	104	1938	1940	5	good	60	Production poor and incon-
Viceroy.....	large	medium	3/10	3/20	6/30	7/10	102	1938	1940	5	very good	80	sistent.
Viola.....	small	medium	3/5	3/14	7/14	7/22	121	1938	1940	4	fair	0	Production consistent,
Vivid Globe....	small	few	3/7	3/15	7/14	7/22	121	1938	1940	4	poor	0	heavy bearer, one of best
Wahlbert.....	large	many	3/4	3/12	7/6	7/14	119	1941	1944	2	fair	0	early whites.
Watson Climax..	large	medium	3/2	3/9	6/9	6/11	93*	1941	1944	2	fair	0	Prolific, fairly consistent in
Welcome.....	small	few	3/5	3/16	7/19	7/24	128	1939	1941	3	poor	0	yield.
White Hale.....	small	medium	2/26	3/4	7/13	7/20	139	1941	1944	2	good	100	Requires heavy thinning,
Whitton Cling..	large	medium	2/28	3/6	7/16	7/21	145	1941	1944	2	poor	0	fairly consistent yield.
Williams.....	er e	medium	3/9	3/17	8/16	8/24	150	1937	1941	3	poor	0	Prolific, fairly consistent in

\*Full bloom to harvest. \*\*Average over entire period.

Table 2. Performance of Peach Varieties at Nacogdoches, 1935-46—Continued

Variety	Flowers		Av. bloom date		Av. harv. date		No. of days *	Year planted	First bearing season	No. of years fruiting	Size of crop **	Percent of good crops	Notes
	Size	Abundance	First	Full	First	Last							
Wilma.....	small	medium	3/5	3/15	7/15	7/25	121	1938	1940	5	good	60	Heavy yields some seasons. Shy bearer, heavy loss from brown rot.
World's Earliest	large	many	3/7	3/19	5/17	5/24	63	1939	1941	3	fair	33	
Yellow Hiley....	large	medium	3/8	3/15	7/20	7/28	126	1938	1940	3	fair	0	Very prolific some years. Production good some seasons.
Yunnan P. I. 55885	large	many	2/26	3/1	7/18	7/27	139	1937	1939	4	good	50	
Yunnan P. I. 55886	large	many	3/8	3/19	7/29	8/2	132	1937	1939	6	poor	0	Has been shy and inconsistent. Prolific some years, inconsistent in yields.
Yunnan P. I. 55888	small	many	3/5	3/14	7/28	8/6	136	1938	1941	3	fair	33	

\*Full bloom to first harvest. \*\*Average over entire period.



Table 3. Description of Peach Varieties Tested at Nacogdoches, 1935-46

Variety	Flesh				Fruit		Tree		Notes
	Color	Adherence	Texture	Firmness	Size	Shape	Habit	Vigor	
A. A. Schilling . . .	yellow	free	slightly stringy	tender	medium	ovate	spreading	vig.	Good quality; local markets; slightly soft at tip.
Admiral Dewey . . .	yellow	semi-cling	stringy	medium	medium	round	upright	vig.	Fair quality, very susceptible to brown rot; heavy pubescence.
Afterglow . . . . .	yellow	free	stringy	firm	large	round	upright	vig.	Good quality; ships.
Alexander . . . . .	greenish white	cling	stringy	firm	medium	round	upright	weak	Poor quality, very susceptible to brown rot; Mayflower type.
Alton . . . . .	white	semi-cling	stringy	medium	large	round	spreading	vig.	Fair quality; very popular on local markets.
Anna . . . . .	white	semi-cling	slightly stringy	medium	medium	round	spreading	vig.	Good quality; very popular on local markets.
Annabel . . . . .	yellow	free	slightly stringy	firm	medium	round	spreading	med.	Fair quality; slightly tart; ships.
Ansenne* . . . . .	greenish white	free	stringy	medium	small	oval	spreading	vig.	Skin glossy red; very popular on local markets; good quality.
Arp . . . . .	yellow	cling	stringy	tender	medium	round	spreading	med.	Newday and Sunhigh ripening at same date; either preferable.
Augbert . . . . .	yellow	free	coarse	tough	medium	round	upright	vig.	Heavy loss from oriental fruit moth.
Babcock . . . . .	white	free	stringy	tender	small	ovate	spreading	med.	Poor quality, fruit very popular on roadside stands.
Banner . . . . .	yellow	free	fine	firm	medium	round	upright	vig.	Good quality.
Barbara . . . . .	yellow	free	grained	firm	medium	cordate	spreading	vig.	Fair quality.
Beauty . . . . .	yellow	free	fine	tender	medium	round	upright	med.	Fair quality, external markings similar to Arp.
Belle . . . . .	white	free	slightly stringy	tender	medium	round	spreading	vig.	Quality mild and sweet, too late for white peach.
Bernard Early . . . .	yellow	free	slightly stringy	medium	medium	oval	spreading	vig.	Very similar to Banner; oriental fruit moth damage severe.
Bestmay . . . . .	white	cling	stringy	medium	large	round	upright	vig.	Slightly tart; very popular on local markets; attractive.
Best White . . . . .	white	free	fine	very tender	medium	round	upright	med.	Poor quality; very heavy pubescence.
Big Red . . . . .	yellow	free	grained	firm	large	cordate	spreading	vig.	Excellent quality; very attractive; ships.
Billmeyer . . . . .	yellow	free	stringy	medium	medium	ovate	spreading	vig.	Fair quality; not attractive.
Brackett . . . . .	yellow	free	slightly stringy	firm	large	round	spreading	vig.	Good quality; slight pubescence, seed extra large.

\*Nectarine.

Table 3. Description of Peach Varieties Tested at Nacogdoches, 1935-46—Continued

Variety	Flesh				Fruit		Tree		Notes
	Color	Adherence	Texture	Firmness	Size	Shape	Habit	Vigor	
Burbank Early	yellow	free	slightly	firm	medium	round	spreading	med.	Excellent quality; ships well.
July Elberta	yellow	free	stringy	tender	medium	cordate]	upright	vig.	Poor quality, breaks down from brown rot in pack.
Burbank Giant	yellow	free	stringy	tender	medium	round	upright	vig.	Fruit does not size well.
Freestone	yellow	semi-cling	fine	medium	small	round	spreading	med.	
Burbank July	yellow	semi-cling	grained	medium	small	cordate	spreading	med.	
Gold	yellow	free	fine	firm	medium	broadly	spreading	vig.	Excellent quality; very popular on local markets; seed large.
Canadian Queen	yellow	free	grained	firm	medium	ovate	spreading	vig.	Fair quality, fruit very attractive.
Candoka.....	yellow	free	fine	firm	medium	round	upright	weak	
Carman.....	white	free	grained	medium	large	round	spreading	vig.	Fair quality; slightly tart; popular on local markets.
Carrie.....	yellow	cling	grained	tough	small	oval	spreading	vig.	Good quality, excellent for drying.
Charlotte.....	yellow	free	stringy	firm	medium	round	upright	vig.	Good quality, excess red through flesh.
Chief.....	dark red	cling	fine	firm	medium	round	spreading	vig.	Desired by many for preserving and pickling.
Chilow.....	yellow	cling	grained	firm	medium	round	spreading	vig.	Similar to Elberta Cling; susceptible to brown rot; excellent for pickling.
Cole Golden.....	yellow	free	stringy	firm	medium	round	spreading	vig.	Good quality, attractive, and ships.
Crawford Early	yellow	free	fine	firm	medium	cordate	spreading	vig.	Good quality, attractive.
Improved	yellow	free	grained	medium	large	oval	upright	med.	Excellent quality, irregular shaped fruit, tip extended.
Colora.....	yellow	free	fine	medium	large	oval	upright	med.	Good quality, popular on local markets, very attractive.
Cumberland.....	white	free	grained	medium	large	oblate	spreading	vig.	Good quality, attractive, popular on local markets.
C. W. Cartwright..	yellow	semi-cling	fine	tender	medium	round	spreading	vig.	Excellent quality, similar to Rochester.
Dalton.....	yellow	free	grained	medium	medium	cordate	upright	vig.	Fruit rough, variable in size, unattractive.
Decker.....	greenish	cling	stringy	medium	medium	oval	upright	weak	Attractive yet poor demand due to short heavy pubescence.
Delicious.....	white	mostly	fine	tender	medium	round	spreading	med.	Poor quality, very susceptible to brown rot; color poor.
Dillion Creek.....	white	free	grained	medium	small	cordate	spreading	med.	
Dr. Burton.....	white	free	stringy	firm	medium	round	spreading	med.	Fair quality, dull appearance in pack, not popular on local market.
	white	free	stringy	firm	medium	oval	spreading	vig.	

Dr. Doty's Elberta	yellow	free	slightly stringy	medium	medium	oval	spreading	med.	Good quality, attractive, resembles Golden Jubilee.
Duss Turner	white	cling	stringy	tender	medium	oval	spreading	med.	Poor quality, very susceptible to brown rot; color poor.
Early Halehaven	yellow	free	slightly stringy	firm	large	round	upright	vig.	Good quality, attractive, ships.
Early Elberta	yellow	free	slightly stringy	medium	medium	oval	spreading	vig.	Resembles Slappey.
Early Imperial	yellow	free	slightly stringy	medium	medium	round	upright	vig.	Fair quality, attractive, skin tough but breaks down in pack easily.
Early Queen	yellow	mostly free	slightly stringy	medium	medium	oval	spreading	vig.	Good quality, attractive, resembles Golden Jubilee.
Early Rose	white	cling	fine grained	tough	small to medium	oval	spreading	med.	Poor quality, flat flavor, ships.
Early Wheeler	white	cling	stringy	tough	large	oval	upright	vig.	Poor quality, sheds before ripe, splits at stem end.
Eclipse	yellow	free	slightly stringy	medium	small	oval	spreading	med.	Excellent quality, irregular fruit lowers appearance of pack.
E. H. Hendon	red-yellow	cling	fine grained	tough	small	round	upright	vig.	Resembles Moneymaker.
Elberta	yellow	free	slightly stringy	firm	medium	round	upright	vig.	Quality of tree ripe fruit good; ships.
Elberta Cling	yellow	cling	fine grained	medium	large	oblong	spreading	med.	Very sweet, excellent pickling and preserves.
Elberta Late	yellow	free	stringy	firm	medium	round	spreading	vig.	Excellent quality, fruit attractive, coarse seed, ships.
Elberta Supreme	yellow	free	stringy	firm	large	oblong	spreading	vig.	Good quality, elongated tip bad in pack, attractive.
El Cling	white	cling	fine grained	tough	small	oblong	upright	vig.	Too late for section, very heavy loss from oriental fruit moth.
Engle	yellow	free	very stringy	firm	medium	round	spreading	vig.	Good quality, unattractive.
Erly-Red-Fre	white	free	slightly stringy	medium	medium	round	spreading	med.	Fair quality, large suture bulge.
Fair Beauty	yellow	free	slightly stringy	firm	large	round	upright	med.	Fair quality, attractive.
Fay Elberta	yellow	free	fine grained	firm	large	oval	upright	vig.	Good quality, well colored, attractive.
Fertile Hale	yellow	free	fine grained	firm	large	round	upright	vig.	Excellent quality, slight excess pubescence; yellow to seed.
Fireball	white	cling	fine grained	tough	large	round	upright	vig.	Poor quality, preferred for pickling, red 14 days before ripe.
Fisher	yellow	free to cling	fine grained	medium	medium	round	upright	vig.	Good quality, attractive.
Flaming Gold	yellow	free	fine grained	medium	medium	round	spreading	vig.	Good quality, attractive, large suture bulge.
Flatonia	white	semi-cling	stringy	tender	medium	round	spreading	vig.	Fair quality, Radiance preferred, tender in pack.
Florence	white	cling	stringy	tender	small	round	spreading	med.	Fruit very attractive, sweet for early variety.
Frank	yellow	cling	fine grained	very firm	medium	round	spreading	vig.	Good quality, excellent for preserves and pickles.

Table 3. Description of Peach Varieties Tested at Nacogdoches, 1935-46—Continued

Variety	Flesh				Fruit		Tree		Notes
	Color	Adherence	Texture	Firmness	Size	Shape	Habit	Vigor	
Frankie.....	yellow	free	stringy	firm	medium	round	upright	med.	Good quality, attractive.
Fredericka.....	yellow	free	stringy	firm	medium	round	upright	vig.	Good quality.
Gage Elberta.....	yellow	free	stringy	firm	medium	oblong	spreading	vig.	Good quality, heavy pubescence, slightly tender in pack.
General Lee.....	greenish white	cling	fine grained	tender	medium	round	spreading	vig.	Poor quality, very ugly due to heavy pubescence over greenish skin.
Geo. Harris Indian Squaw	red	cling	fine grained	firm	small	round	upright	weak	Poor quality, poor Indian cling selection.
Globe Haven.....	yellow	free	fine grained	firm	large	round	spreading	vig.	Excellent quality, attractive, ships.
Golden Beauty....	yellow	free	slightly stringy	firm	medium	ovate oval	spreading	med.	Excellent quality, does not resemble Beauty, attractive, ships.
Golden Elberta Cling	yellow	cling	fine grained	firm	medium	round oblong	spreading	vig.	Good quality, resembles Stark's Early Elberta externally, attractive.
Golden Drea.....	white	cling	fine grained	firm	medium	round	spreading	vig.	Too late for white peach, heavy loss from oriental fruit moth.
Golden East.....	yellow	free	slightly stringy	firm	large	round	upright	vig.	Good quality, one of the more promising new varieties, ships.
Golden Gem.....	yellow	cling	fine grained	tough	medium	ovate round	upright	med.	Fruit sheds before ripe, very heavy loss from oriental fruit moth.
Golden Globe.....	yellow	free	stringy	firm	large	round	upright	med.	Good quality, slow to come into bearing.
Golden Jubilee....	yellow	free	slightly stringy	medium	medium	oval oblong	spreading	med.	Quality good for early yellow, attractive, popular on local market.
Gold Drop.....	yellow	free	stringy	tender	medium	round	upright	vig.	Poor quality; heavy loss from oriental fruit moth.
Gold Dust.....	yellow	cling	fine grained	tough	medium	round	spreading	vig.	Other yellow clings preferable; heavy loss from oriental fruit moth.
Gold Medal.....	yellow	free	slightly stringy	firm	medium	round	spreading	vig.	Excellent quality, attractive, ships.
Gold Standard....	yellow	cling	fine grained	firm	medium	round	spreading	vig.	Good quality, attractive.
Governor Hogg....	white	free	stringy	tender	large	round	upright	vig.	Poor quality, susceptible to brown rot.
Governor Lanham.	yellow	cling	fine grained	firm	medium	round	spreading	vig.	Good quality, ships.

Griffith Cling.....	yellow	cling	fine grained	firm	medium	oblong	spreading	med.	Excellent quality, flesh yellow to seed, attractive.
Halate.....	yellow	free	stringy	firm	medium	round	spreading	vig.	Good quality, has high cold requirements, attractive.
Halberta.....	yellow	free	slightly stringy	firm	very large	broadly ovate	spreading	med.	Excellent quality, attractive.
Halchaven.....	yellow	free	slightly stringy	firm	medium	round	spreading	vig.	Good quality, attractive, ships.
Hale Early.....	greenish white	free	fine grained	tender	medium	round	upright	vig.	Good quality, mild flavor.
Hall (Hall's Yellow)	yellow	free	stringy	tender	very small	round	willowy	vig.	Poor quality, not desirable in this section.
Hardee.....	yellow	free	slightly stringy	medium	very large	round ovate	upright	vig.	Fair quality, fruit roughly shaped.
Hardyberta.....	yellow	free	slightly stringy	firm	medium	oblong	spreading	vig.	Good quality, fruit rough but attractive.
Hart Cling.....	white	cling	fine grained	firm	medium	round	spreading	vig.	Fair quality, fairly attractive.
Hazel.....	yellow	free	fine grained	firm	large	round ovate	spreading	vig.	Excellent quality, attractive, ships.
Heath Cling.....	white	cling	fine grained	tough	medium	round oval	spreading	med.	Poor quality, very heavy loss from oriental fruit moth.
Heidelberg.....	yellow	free	slightly stringy	firm	small medium	round ovate	spreading	vig.	Fruit not attractive, breaks down easily from brown rot.
Henderson Elberta Cling	yellow	cling	fine grained	tough	medium	round	spreading	vig.	Good quality, attractive, considerable loss from oriental fruit moth.
Henrietta.....	yellow	cling	fine grained	tough	medium	round	upright	vig.	Flavor slightly tart, attractive.
Hiley.....	white	free	stringy	tender	small medium	oval	spreading	med.	Fair quality, dull red blush, fairly attractive, flesh stained red to seed
Hiley Belle.....	white	free	fine grained	tender	medium	round ovate	spreading	vig.	Good quality, attractive, popular locally.
Hobson.....	white	free	slightly stringy	medium	small medium	oval	spreading	vig.	Excellent quality, attractive, one of the best white varieties.
Honey Special.....	white	free	fine grained	tender	small	oval	willowy	med.	Good quality, attractive, popular on local markets.
Hope Farm.....	white	free	stringy	tender	large	round ovate	spreading	vig.	Good quality, sweet, not very attractive, tender in pack.
Hoy.....	yellow	free	fine grained	firm	medium	oval	spreading	med.	Good quality, attractive, and ships.
Ideal.....	yellow	free	slightly stringy	firm	medium	oval	spreading	med.	Good quality, fruit rough but attractive, stands well in pack.
Illinois.....	white	free	slightly stringy	medium	medium	round	spreading	vig.	Good quality, not attractive, slight excess of pubescence.
Improved Elberta.....	yellow	free	fine grained	firm	large	round oval	spreading	vig.	Good quality, ships, fruit rough but attractive.
Improved Victor...	white	semi-cling	slightly stringy	tender	medium	round	spreading	vig.	Fair quality, slight excess of pubescence reduces attractiveness.



Table 3. Description of Peach Varieties Tested at Nacogdoches, 1935-46—Continued

Variety	Flesh				Fruit		Tree		Notes
	Color	Adherence	Texture	Firmness	Size	Shape	Habit	Vigor	
Jack Bell.....	cream	cling	fine	tough	large	round	upright	vig.	One of the best white varieties for picking and preserves, ships. Good quality, fairly attractive, sheds easily. Excellent quality, attractive.
Jackson Elberta....	white	free	grained	firm	medium	round	spreading	med.	
July Gold.....	yellow	free	slightly stringy	firm	medium	ovate	upright	vig.	
June Elberta.....	yellow	cling	slightly stringy	tender	medium	round	spreading	vig.	Fair quality, attractive, bruises easily, excess split pits. Very sweet, not attractive, tender in pack.
June Wax.....	greenish	cling	stringy	tender	very large	cordate	spreading	vig.	
J. H. Hale.....	white	free	fine	firm	medium	oval	upright	med.	Good quality, does not size fruit well, color not too attractive. Good quality, fruit attractive, although slightly rough, ships.
Kalamazoo.....	yellow	free	grained	firm	medium	round	spreading	med.	
Kalhaven.....	yellow	free	grained	firm	medium	oval	spreading	vig.	Good quality, rough but attractive, good color, ships. Good quality, poor color, heavy loss from oriental fruit moth.
Katie.....	yellow	free	grained	firm	large	cordate	upright	vig.	
Kent.....	yellow	cling	stringy	firm	medium	oval	upright	med.	Excellent quality, very attractive, good for pickles and preserves. Fair quality, attractive, heavy loss from oriental fruit moth.
Krummel.....	yellow	cling	fine	tough	medium	round	spreading	vig.	
(October)			grained						Good quality, attractive, extra long tip objectionable. Good quality, tip prolonged, heavy loss from oriental fruit moth, color good. Good quality.
Lagrange.....	yellow	free	fine	firm	medium	oval	spreading	med.	
Late Elberta Rex..	yellow	free	grained	firm	medium	oval	upright	vlg	Poor quality, heavy oriental fruit moth damage. Poor quality, not attractive, severe loss from oriental fruit moth.
Lela Dudley.....	yellow	free	slightly stringy	firm	medium	oval	upright	vlg	
Lemon Cling.....	yellow	free	stringy	firm	large	round	spreading	med.	Good quality, attractive, fruit responds to thinning. Good quality, attractive, heavy loss from oriental fruit moth. Poor quality, bruises easily.
Lemon Free.....	yellow	free	fine	firm	small-medium	round	spreading	med.	
Leona.....	yellow	free	grained	firm	large	round	spreading	vig.	Good quality, attractive, fruit responds to thinning. Good quality, attractive, heavy loss from oriental fruit moth. Poor quality, bruises easily.
Liberty.....	yellow	free	grained	firm	medium	round	spreading	med.	
Livingston Beauty.	greenish	free	fine	tough	medium	round	upright	med.	Poor quality, bruises easily. Good quality, attractively colored, popular on local markets.
Lockwood.....	white	free	stringy	tender	medium	oblong	upright	vig.	
	yellow	free	stringy	firm	medium	round	cordate	vig.	

Lutttichau.....	greenish white	free	stringy	tender	medium	round	spreading	weak	Fair quality, not attractive.
L. C. Patterson....	white	cling	fine	tough	medium	round	spreading	vig.	Poor quality, solid bright red 10-14 days before ripe.
Mamie Ross.....	white	free	stringy	tender	medium	oval	upright	vig.	Flavor tart, breaks down easily in pack.
Marigold.....	yellow	semi-cling	fine	tender	medium	oval	upright	weak	Good quality, attractive, almost free when fully ripe.
Markberta.....	yellow	free	fine	firm	medium	round	spreading	vig.	Good quality, ships, attractive, slight astringency.
Mark-Late.....	yellow	free	grained	firm	large	ovate	spreading	vig.	Excellent quality, attractive, ships.
Markham Cling...	yellow	cling	fine	firm	large	oval	spreading	vig.	Good quality, attractive, stands up well in pack and ships.
Markham Jewel...	yellow	free	grained	firm	medium	round	upright	vig.	Excellent quality good appearance in pack, ships.
Mary Woodbury...	yellow	cling	slightly stringy	firm	large	ovate	spreading	vig.	Excellent quality, very attractive, popular on local markets.
Mayflower.....	greenish white	cling	fine	tender	small-medium	round	spreading	med.	Poor quality, the earliest of peach varieties, has high cold requirements.
McDaniel June....	greenish white	cling	stringy	tender	medium	ovate	upright	vig.	Fair quality, bruises easily, home use only.
McDaniel May...	greenish white	cling	stringy	tender	small-medium	round	spreading	med.	Poor quality, slightly bitter, color good, about the same as Mayflower.
McDevitt.....	yellow	cling	fine	tough	medium	round	upright	vig.	Fair quality, attractive, heavy loss from oriental fruit moth.
McKevitt.....	cream-white	cling	fine	medium	medium	round	upright	med.	Fair quality, bruises, severe loss from oriental fruit moth.
Mikado.....	yellow	free	grained	firm	medium	ovate	spreading	vig.	Good quality, attractive, ships, and an excellent yellow free-stone.
Minnie Stanford...	yellow	cling	fine	firm	medium	round	spreading	vig.	Good quality, excellent for preserving, slightly large for pickling.
Moneymaker.....	reddish yellow	cling	grained	tough	medium	round	upright	vig.	A poor selection of Indian cling.
Montopolis.....	greenish white	free	slightly stringy	firm	large	round	upright	vig.	Good quality, attractive, colors well before ripe, ships.
Moore Elberta....	yellow	free	slightly stringy	firm	medium	round	spreading	vig.	Another Elberta selection.
Mountain Rose...	greenish white	cling	very stringy	tender	small	round	spreading	med.	Is similar to if not Mayflower.
Muir.....	dull-lemon	free	stringy	tender	medium	oval	upright	weak	Fair quality, poor color, rough, seed small
Newday.....	yellow	not entirely free	slightly stringy	medium	medium	round	upright	vig.	Good quality and very attractive, an excellent early yellow.
New Honey Dew...	white	free	stringy	tender	large	ovate	spreading	vig.	Good quality, cracks, susceptible to brown rot, tender in pack.
New Prolific.....	yellow	free	stringy	tough	medium	round	upright	med.	Fair quality, fruit rough, but attractive.

Table 3. Description of Peach Varieties Tested at Nacogdoches, 1935-46—Continued

Variety	Flesh				Fruit		Tree		Notes
	Color	Adherence	Texture	Firmness	Size	Shape	Habit	Vigor	
October Beauty...	yellow	cling	fine grained	firm	medium	round	spreading	vig.	Good quality, very attractive, very heavy loss from oriental fruit moth.
Olle.....	reddish white	free	stringy	medium	small	round	spreading	vig.	Poor quality, soft on tip, dark red fruit, attractive, slightly as-tringent.
Oklaberta.....	yellow	free	stringy	firm	large	oval	upright	med.	Poor quality, very pubescent, fruit elongated, color poor.
Orange Cling....	yellow	cling	fine grained	firm	small	round	upright	med.	Preferred by some for pickles, susceptible to brown rot.
Oriole.....	yellow	semi- cling	stringy	medium	medium- large	oval	upright	vig.	Good quality, semi-cling to free when ripe, not too attractive.
Pallas.....	white	free	stringy	tender	small	round oval	spreading	vig.	Poor quality, 90% fruit crack, very susceptible to brown rot.
Payne Beauty....	white	free	stringy	tender	small	oval	spreading	med.	Flavor mild and sweet, suscepti-ble to brown rot, poor color.
Phillips Cling....	yellow	cling	fine grained	firm	medium	round ovate	upright	vig.	Fair quality, severe damage from oriental fruit moth.
Pioneer.....	white	semi- cling	stringy	tender	medium- large	oblong	spreading	vig.	Fair quality, sizes well, other white varieties more desirable.
Polly.....	white	free	slightly stringy	tender	medium large	round cordate	spreading	vig.	Poor quality, attractive, slight excess of pubescence.
Primrose.....	yellow	free	fine grained	firm	medium	oval	spreading	vig.	Good quality, attractive, slight excess of pubescence.
Radiance.....	white	free	slightly stringy	firm	medium large	round oval	upright	vig.	Good quality, attractive, popular on local markets, ships.
Raritan Rose.....	white	free	fine grained	medium	medium	oval	upright	vig.	Good quality, attractive, softens on suture bulge.
Rater No. 1.....	yellow	free	slightly stringy	firm	medium	oval	spreading	med.	Excellent quality, attractive, ripens over short period.
Redelberta.....	yellow	free	fine grained	firm	medium	round oval	spreading	vig.	Excellent quality, attractive, ships, an excellent variety to precede Elberta.
Red Hale.....	yellow	free	fine grained	firm	medium	round	spreading	vig.	Fair quality, rough but attractive, excess red at seed, ships.
Redhaven.....	yellow	free	slightly stringy	tender	small	round oval	spreading	weak	Fair quality, watery, has not lived up to expectations in this section.
Red River.....	white	cling	fine grained	firm	medium	round	upright	vig.	Fair quality, Jack Bell preferable.
Rio Oso Gem....	yellow	free	fine grained	tough	medium	round ovate	spreading	med.	Good quality, very attractive, colors 10-14 days before ripe, ships.



Rochester.....	yellow	free	slightly stringy	firm	medium	round cordate	spreading	vig.	Good quality, excess pubescence, arsenical injury, poor color, susceptible to brown rot.
Rosebud.....	greenish white	free	fine grained	tender	medium	round	spreading	vig.	Fair quality, susceptible to scab, soft tip, poor appearance.
S. A. Childs.....	yellow	free	fine grained	medium	medium	round	spreading	vig.	Fair quality, slightly tart, very attractive.
Salberta.....	yellow	free	fine grained	firm	medium	round ovate	upright	vig.	Good quality, attractive, ships, excellent packing.
Salwey.....	yellow	free	slightly stringy	firm	small	round ovate	spreading	med.	Fair quality, heavy loss from oriental fruit moth, desirable for home drying.
September Elberta	yellow	free	fine grained	tough	medium	round ovate	upright	vig.	Poor quality, almost entire loss from oriental fruit moth.
Shafter J. H. Hale	yellow	free	slightly stringy	firm	medium large	round ovate	spreading	med.	Excellent quality, very attractive, ships.
Shalil (P. I. 638-52)	yellow	free	slightly stringy	medium	small	oval	spreading	vig.	Fruit useless, except for root-stock purposes.
Shippers Late Red	yellow	free	slightly stringy	firm	medium	round	spreading	vig.	Good quality, slight astringency, attractive, fruit sizes well.
Short.....	yellow	free	slightly stringy	firm	medium	round oval	spreading	vig.	Good quality, attractive, ships.
Silver Medal.....	white	cling	fine grained	firm	medium	round ovate	upright	vig.	Good quality, attractive, preferred for pickles and preserves, ships.
Slappey.....	yellow	free	slightly stringy	medium	small-medium	oval cordate	spreading	med.	Fair quality, Halchaven preferable.
S. M. Cain.....	yellow	cling	fine grained	tough	medium	oval	upright	vig.	Good quality, attractive, sheds before full ripe.
Sneed.....	white	cling	stringy	tender	small	round	spreading	vig.	Poor quality, flesh tough, sheds before ripe, susceptible to brown rot.
South Haven.....	yellow	free	slightly stringy	firm	large	round oval	upright	vig.	Excellent quality, color attractive, has high cold requirement.
Stark's Early Elberta	yellow	free	slightly stringy	medium	medium	round oval	spreading	vig.	Good quality, slightly better, slightly tender in pack.
Stephenson.....	yellow	cling	fine grained	firm	medium large	round oval	spreading	vig.	Excellent quality, attractive, ships, one of the best yellow clings.
Stinson (October) ..	white	cling	fine grained	tough	small	round	spreading	med.	Very late and heavy loss from oriental fruit moth.
St. John.....	yellow	free	slightly stringy	medium	small	round ovate	spreading	vig.	Fair quality, very susceptible to brown rot, not popular on markets.
Stoker No 2.....	white	cling	slightly stringy	tender	medium	round cordate	spreading	vig.	Fair quality, not popular on local markets.
Stolle.....	greenish white	free	slightly stringy	tender	small-medium	round ovate	spreading	vig.	Poor quality, unattractive.
Stump.....	yellow	free	fine grained	firm	medium large	round ovate	spreading	med.	Fair quality, fruit rough with poor color.

Table 3. Description of Peach Varieties Tested at Nacogdoches, 1935-46—Continued

Variety	Flesh				Fruit		Tree		Notes
	Color	Adherence	Texture	Firmness	Size	Shape	Habit	Vigor	
Summercrest.....	yellow	free	slightly stringy	medium	medium	round oblong	upright	med.	Good quality, not colored as highly as desired some seasons.
Sunbeam.....	yellow	semi-cling	slightly stringy	tender	small-medium	round	spreading	med. weak	Fair quality, attractive and popular on local markets.
Sungold.....	yellow	free	fine grained	firm	medium	round oval	spreading	med.	Excellent quality, attractive, excess red throughout flesh.
Sunhigh.....	yellow	free	fine grained	medium	medium large	round oval	upright	vig.	Excellent quality, very attractive, one of best early yellow varieties.
Surprise.....	white	cling	fine grained	tough	medium	round oval	spreading	vig.	Poor quality, very late, heavy loss from oriental fruit moth.
Sunglow.....	yellow	free	stringy	medium	medium	round oval	upright	vig.	Good quality, very attractive, heavy loss from oriental fruit moth, ships.
Tena.....	yellow	free	fine grained	firm	medium	round ovate	spreading	med.	Excellent quality, good appearance in pack, sizes well.
Texaberta.....	yellow	free	slightly stringy	firm	medium	round oval	spreading	vig.	Good quality, attractive, ships and popular locally.
Texas King.....	greenish white	free	stringy	tough	medium	round	upright	vig.	Good quality, not attractive, Radiance preferable.
Triumph.....	yellow	cling	stringy	tender	medium	round oval	upright	med.	Good quality, excessive pubescence, not popular locally, susceptible to brown rot.
Triogem.....	yellow	semi-free	slightly stringy	firm	medium large	round ovate	spreading	vig.	Good quality, attractive, colors well before ripe, popular locally, ships.
Tuscan Cling.....	yellow	cling	fine grained	tough	medium	round oval	upright	vig.	Fair quality, fruit rough but attractive, breaks down in pack.
Unceda.....	white	cling	slightly stringy	medium	small-medium	round	spreading	vig.	Fair quality, slight astringency, sizes and sells well for early variety.
Upshur County....	yellow	free	fine grained	firm	medium large	round oblong	spreading	vig.	Good quality, very attractive, ships.
Valiant.....	yellow	free	fine grained	firm	medium	round cordate	spreading	vig.	Excellent quality, very attractive, ships, popular on local markets.
Vedette.....	yellow	free	slightly stringy	firm	medium	round oval	spreading	vig.	Excellent quality, very attractive, ships, not as firm as Veteran.
Veteran.....	yellow	free	slightly stringy	firm	medium large	round	upright	vig.	Excellent quality, very attractive, ships, preferable to Valiant.

Viceroy.....	yellow	semi-cling	fine grained	firm	medium	round cordate	upright	vig.	Good quality, very attractive, almost free when full ripe.
Viola.....	yellow	free	fine grained	firm	medium	round cordate	spreading	med.	Excellent quality, very attractive, ships, colors well before ripe.
Vivid Globe.....	yellow	free	stringy	firm	medium large	round ovate	spreading	med.	Good quality, attractive, packs well and ships.
Wahlbert.....	yellow	free	stringy	firm	small	round ovate	willowy	vig.	Fair quality, not attractive due to heavy pubescence, others preferable.
Watson Climax....	white	free	slightly stringy	tender	small-medium	round	upright	med.	Fair quality, solid dark red fruit not attractive; tender in pack.
Welcome.....	yellow	free	slightly stringy	firm	medium large	round ovate	spreading	vig.	Good quality, fruit attractive, ships.
White Hale.....	white	free	fine grained	firm	large	round	upright	vig.	Good quality, fruit rough and irregular.
Whitton Cling....	white	cling	fine grained	firm	medium	round oval	spreading	med.	Fair quality, not attractive.
Williams.....	yellow	cling	fine grained	tough	small-medium	round ovate	spreading	med.	Good quality, attractive, too late to avoid oriental fruit moth damage.
Wilma.....	yellow	free	fine grained	firm	medium	round cordate	spreading	vig.	Good quality, solid lemon yellow but attractive in pack.
World's Earliest...	white	cling	fine grained	tough	small	round	spreading	vig.	Very poor quality, flesh never thoroughly ripe, attractive.
Yellow Hiley.....	yellow	free	fine grained	firm	medium	round ovate	spreading	vig.	Good quality, tender in pack, heavy pubescence, color poor.
Yunnan P. I.-55885	white	cling	fine grained	medium	small	round	spreading	vig.	Fair quality, attractive, popular on local markets for pickling.
Yunnan P. I.-55886	greenish white	free	stringy	medium	large	round	spreading	vig.	Poor quality.
Yunnan P. I.-55888	yellow	cling	fine grained	firm	small	round oval	upright	vig.	Fair quality.



Figure 1. Radiance is an outstanding new early white freestone for local market.

### GENERAL COMMENTS ON PEACH VARIETIES

**A. A. Schilling.**—An unintroducted seedling furnished by A. A. Schilling, Bastrop, Texas. One of the earliest yellow freestones grown in the test. Flesh almost solid yellow to pit, and of good quality. Slightly tender for trucking, but popular on local markets. Newday and Sunhigh of the same season are preferred.

**Admiral Dewey.**—In an effort to have available an early yellow freestone this variety has been widely planted since the turn of the century. Its excess pubescence, susceptibility to brown rot and peach scab, and its unattractive fruit remove it from the list of desired varieties.

**Afterglow.**—Introduced by the New Jersey station in 1938, this is a J. H. Hale seedling. Its production has not been comparable with Elberta which is of the same season. The variety has thus far shown a tendency to have a short bloom period. This firm yellow freestone is of good quality.

**Alexander.**—This variety is similar in both tree and fruit characters to Mayflower. Its high cold requirement along with a low percentage of years having profitable crops limits its use in this section. For the home orchardist who desires an extremely early fruit however poor its quality, planting space might be provided for a tree or two.

**Alton.**—A white semi-cling that is slightly earlier than Mamie Ross. The local market has accepted Alton although stiff competition is offered by many desirable yellow freestones of the same season.

**Anna.**—Although this variety ripens with Golden Jubilee, its pleasing appearance and sweet flavor assures it a high rating on the local markets. It can be trucked moderate distances. Consistency of production, high yields, and ability to produce good sized fruit when the tree is heavily loaded guarantees the grower a crop of white, semi-cling peaches 80 percent of the time.

**Annabel.**—This yellow freestone is of the Elberta season. It has failed to show any special features that would tend to encourage its planting in this section.

**Ansenne (nectarine).**—The variety has been profitable in our test. Once introduced to the trade the popularity increases rapidly. The main use is for fresh fruit, dessert, and as a canned product with the peel on. It is tender for shipping, but can be hauled moderate distances. The smooth-skinned fruit is very susceptible to brown rot, and it requires an additional application of sulphur to control the disease.

**Arp.**—The variety originated with C. P. Orr, Arp, Texas, about 1897 (5). Its popularity has rapidly waned since the introduction of a number of more desirable yellow freestones of earlier ripening dates, such as Fisher, Newday, and Sunhigh. The fact that the fruit bruises easily, and is a cling of only fair quality, as compared to the above new varieties, lowers its popularity.

**Augbert.**—Introduced about 1897, by Joel Boon, Lindale, Texas. It has been used rather widely to extend the season into the last of August. The appearance of the oriental fruit moth during recent years has caused the variety to have little value in this section. The attractive firm fruit ships well; the quality is good.

**Babcock.**—A variety originated by the California station as a mild-climate peach. At Nacogdoches it has been very prolific. Fruit size is not increased by thinning. The attractive fruit is susceptible to brown rot, is too tender to ship, and is of poor quality. Yet, on account of its color, it is very much in demand at roadside stands and on the local markets.

**Banner.**—This variety is too late for this section. Excessive pubescence and dull greenish-yellow flesh detracts from its appearance. It breaks down in the pack. The production is light most years and inconsistent.

**Barbara.**—This variety was introduced by J. W. Stubenrauch, Mexia, Texas. It is a cross of Bell's October and Elberta. At Nacogdoches it has been prolific and consistent in production of fair yields. The loss from oriental fruit moth damage is heavy. The fruit sizes well and is a good shipper.

**Beauty.**—This yellow freestone fruit has the external markings of the Arp. The cream colored flesh is streaked throughout with bright red. The quality is fair. The pack is fairly attractive, but the fruits are inclined to be dull and tend to lose their original shape after a short display period.



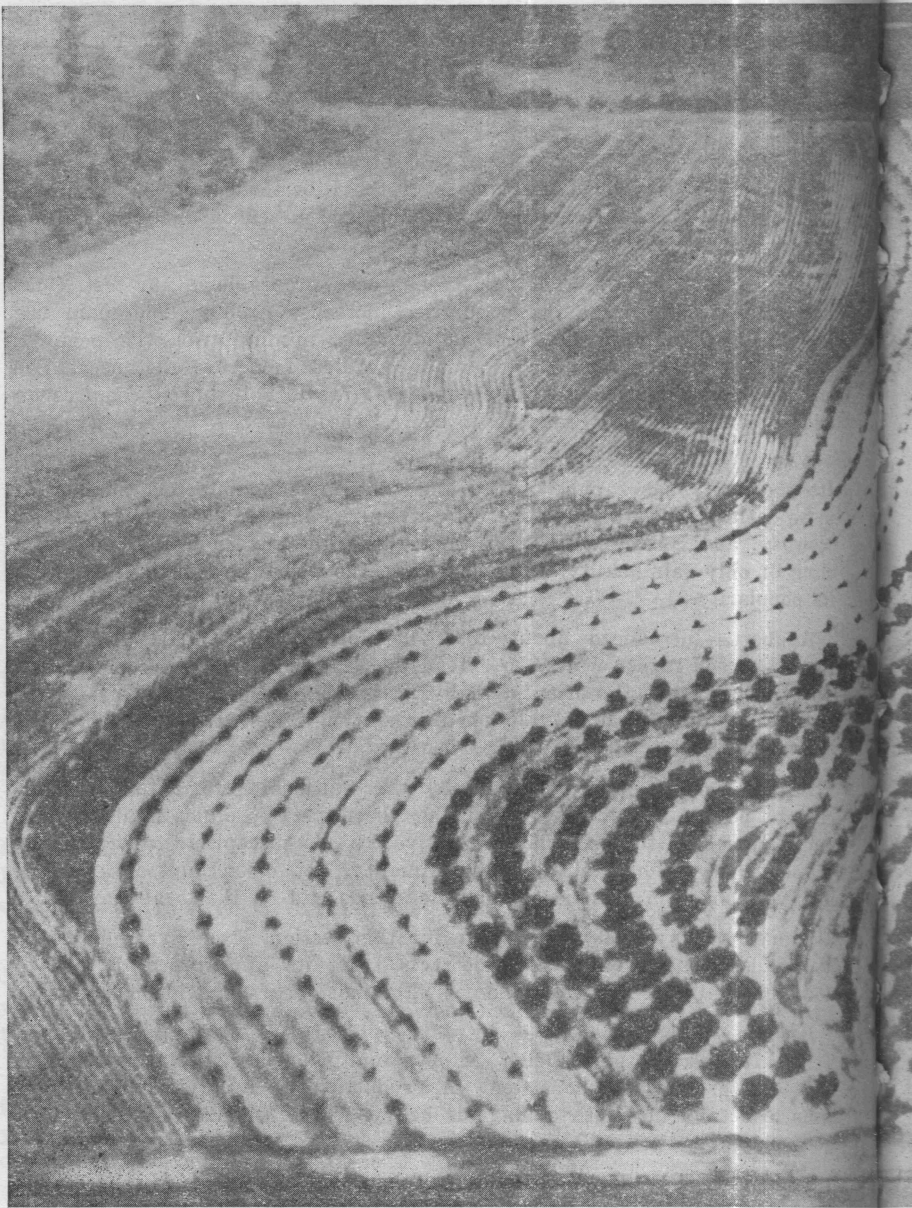
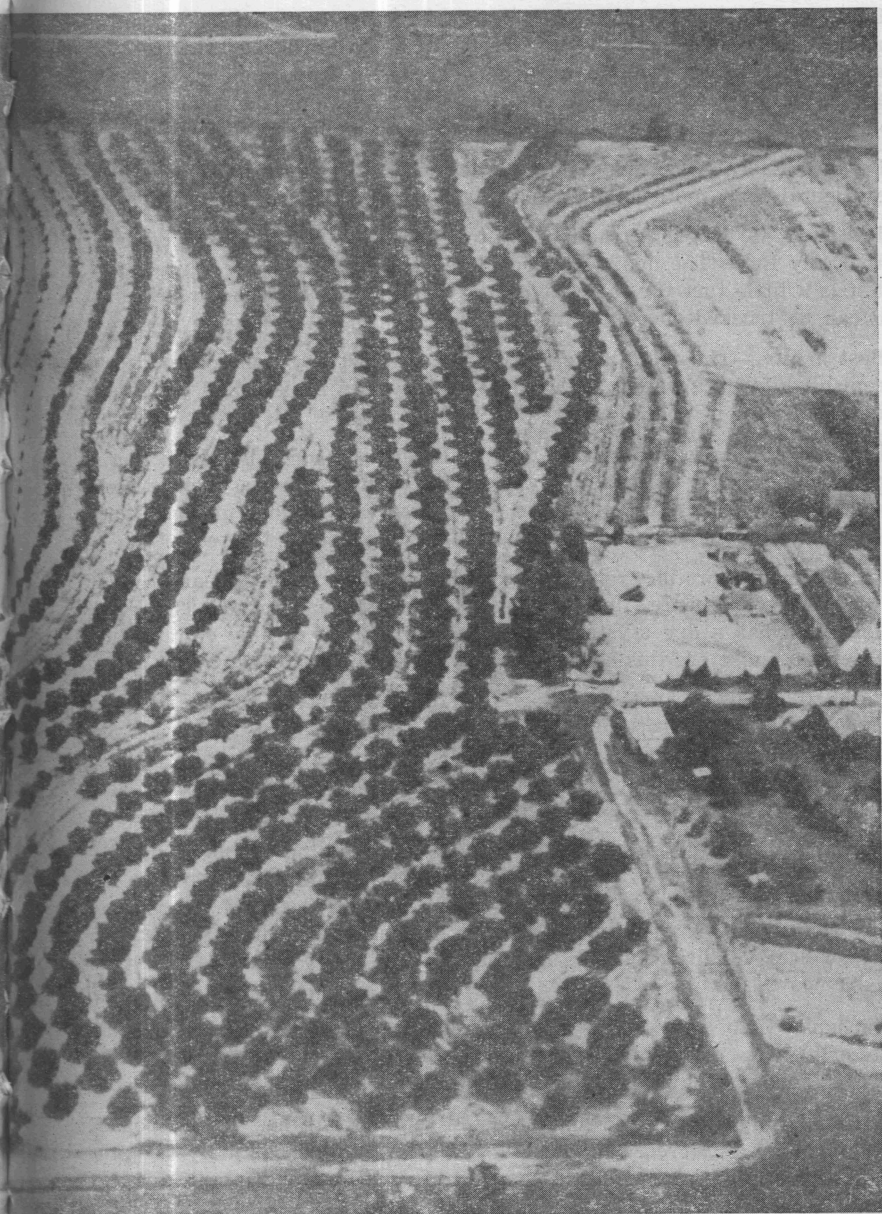


Figure 2. Aerial picture of Substation No. 11 at Namhowi



Showing the terrace system used in peach variety planting.

**Belle.**—(Belle of Georgia). A white variety that has been one of the 50 varieties grown commercially in the United States during the past 25 years (10). It colors well in advance of ripening for shipping. However, there are a number of yellow freestones available for the same season, which is only six days before Elberta.

**Bernard Early.**—The low yield, late season, and heavy loss of fruit from the oriental fruit moth eliminates the variety for this section.

**Bestmay.**—A large, attractive, white cling that ripens a week earlier than Early Rose. The quality is considered good for an early white peach, but it is a little tart for some. It colors well some 10 days before ripening and can be trucked short distances.

**Best White.**—The fruit is ugly with a heavy cottony pubescence over a greenish-white background. This white variety has no seasonal advantage and the quality is poor.

**Big Red.**—A large yellow freestone of Elberta season. The production is good some seasons. It has a higher quality than Elberta and presents a more favorable appearance in the pack. However, its lack of consistency in producing good yields most seasons limits its use in this area.

**Billmeyer.**—A prolific yellow freestone that has poor appearance due to its heavy pubescence. Its cavity extends into a deep suture. The lemon yellow flesh has a dry crystalline appearance, and is of only fair quality. It has no promise for this section.

**Brackett.**—This is another yellow freestone of Elberta season that has produced profitable crops during most of the six years tested at this station. Although prolific, it sizes well. The seed is objectionably coarse. The deep yellow flesh is light red at the seed, and sufficiently firm to ship well. The quality is good. An excellent variety for canning.

**Burbank Early July Elberta.**—This variety is gaining in popularity because of its prolificacy. However, at Nacogdoches, this character has not assured dependable yields when late spring freezes occurred. It requires heavy thinning to size well. The fruit is attractive. The firm yellow flesh has excellent quality and can be shipped. It is 10 days earlier than Halehaven.

**Burbank Giant Freestone.**—The fruit is irregular, rough, and has an extremely long-curved tip. It is susceptible to scab. Brown rot causes the pack to break down rapidly. The quality is poor.

**Burbank July Gold.**—The small, lemon-yellow fruit has not responded to thinning by an increase in size. The trees are only moderately vigorous and are prolific during favorable years. Preferred by some for pickling.

**Canadian Queen.**—This variety is a few days earlier than Elberta. The yellow flesh is lightly streaked with red throughout with heavy red at the seed. The quality is excellent. The fruit stands up well in pack and ships.



**Candoka.**—The few fruit set during three fruiting seasons showed it to be the most attractive peach grown in the test. The lack of production eliminates it for East Texas.

**Carman.**—This variety is listed (10) as one of the 50 grown commercially during the past 25 years. It was developed by J. W. Stubenrauch, Mexia, Texas, in 1899. It has long been popular for its ability to size fruit when heavily loaded, and consistency of production. The fruit colors well in advance of ripening, is roundish and shows to advantage in the pack. However, the fruit breaks down fast when ripe, and is slightly tart with only fair dessert quality. The appearance of high quality yellow freestones, such as Halehaven, at this season (late June) is pushing Carman out of commercial production.

**Carrie.**—A seedling of Frank originated by J. W. Stubenrauch. It is not in the same class with its parent in either yield or desirability. At Nacogdoches, it has been too prolific, resulting in small size even when properly thinned. There is heavy loss from oriental fruit moth and from scab. It is liked by some for drying, but Salway is preferred for this purpose.

**Charlotte.**—Originated by J. A. Evans, Arlington, Texas. Its production is erratic at Nacogdoches. The large yellow freestone fruit is very attractive and a good quality. It is four days later than Elberta.

**Chief.**—An Indian Cling selection made by Wolfe Nursery, Stephenville, Texas. It is typical of the old type Indian Cling as it is dark beet red to the seed. This type is very much in demand in this section for pickling. Very little thinning is required as the fruit tends to become too large for the desired pickle size.

**Chilow.**—The trees under test were identical with those of Elberta Cling. The medium-small, yellow-fleshed fruit has a desirable individual flavor. It is very much in demand for preserving and pickling. The trees are vigorous and prolific. The fruit increases slightly in size with heavy thinning. It is somewhat susceptible to brown rot and scab.

**Cole Golden.**—An attractive yellow freestone originated by Mr. Cole of San Augustine, Texas. It is promising to precede Elberta as it is eight days earlier. It is slow to come into bearing and has a tendency to bloom too early. The firm fruit is of good quality and ships well.

**Crawford Early Improved.**—This variety has been prolific and consistent in production at Nacogdoches. The fruit is smaller than desired for a yellow freestone of Elberta season. The quality is good. It has a tendency to bruise slightly in the pack.

**Colora.**—The irregular fruits are not attractive in the pack. An extreme bulge over the suture softens and bruises easily while being packed. A number of slightly earlier varieties, such as Veteran, Vedette, and Vice-roy, are preferred.

**Cumberland.**—Introduced by the New Jersey station in 1925; a cross of Belle and Greensboro (1). This is an excellent variety for mid-June. It ripens with Anna and Golden Jubilee. The fruit sizes well, is attractive and maintains its popularity on local markets. It colors sufficiently ahead of ripening to permit trucking short distances. The quality is good and slightly milder than Radiance. The yield has been good and consistent at Nacogdoches.

**C. W. Cartwright.**—This is mostly cling until full ripe when it becomes partially free. The attractive, red-streaked yellow fruit is tender for shipping. It is popular on local markets and is one of the earliest yellow varieties.

**Dalton.**—The external fruit characters resemble Rochester. It is also susceptible to brown rot and scab. The dates of bloom and first harvest are almost identical. Rochester has been very consistent in production, while Dalton is irregular; both are prolific.

**Decker.**—This variety is not adapted to this section. A satisfactory yield was not produced during the entire test. The fruit is rough and variable in size and shape. The flesh is white and very red at the seed; flavor is bitter if not full ripe.

**Delicious.**—Introduced by the New Jersey station in 1925; another selection of the Belle and Greensboro cross. The quality is good in this white freestone. It fails to meet the market requirements as the short stiff pubescence is not pleasing in appearance. The trees have not been thrifty. It is irregular in production. The fruit is tender and breaks down easily in the pack.

**Dillion Creek.**—A white freestone of Mamie Ross season. The tender fruit has poor quality, breaks down easily in the pack and matures over a short period. Yields are good and fairly consistent. Radiance is preferred.

**Dr. Burton.**—This variety is also of the Mamie Ross season, and has both high yields and consistency of production. The quality is only fair and the appearance in the pack is dull. It sells poorly on the local market. Radiance is preferred.

**Dr. Doty's Elberta.**—This variety is very similar to Golden Jubilee in bloom date, time of harvest, and consistency of production. The fruit tends to drop. It also has the habit of softening on the tip before ripening, as does Golden Jubilee.

**Duss Turner.**—The appearance and quality are poor. The tender fruit is susceptible to brown rot, and the yields have been low.

**Early Halehaven.**—(U. S. Pat. 235). It was discovered as a limb sport on a Halehaven tree in the orchard of John Nametz near Benton Harbor, Michigan, in 1938. This variety precedes Halehaven by 13 days, in spite of an earlier report (9) made on one season's yield, which stated that it was not earlier than Halehaven. Although its production has been

observed for only two years, it would seem to be prolific, as there has been a heavy set of buds each season. It has a tendency to bloom too early. The quality of the yellow freestone is good, and the appearance pleasing. It stands up well on local markets and should ship well.

**Early Elberta.**—It resembles the Slappey in fruit size and appearance, as well as in dates of first bloom and of harvest. Both are prolific and require heavy thinning to secure an increase in size of fruit. The quality is good. Halehaven is much preferred, and is six days earlier.

**Early Imperial.**—The production has not been satisfactory. The fruit is attractive and of fair quality. The skin is tough, but cracks easily in the pack.

**Early Queen.**—This variety closely resembles Golden Jubilee and Dr. Doty's Elberta in appearance and quality of fruit. The bloom dates are the same. However, Early Queen ripens three days later than the others and has produced five consecutive good crops, as compared with approximately 80 percent good crops for the other varieties.

**Early Rose.**—The production of this variety is its outstanding character. It is prolific to the extent that thinning operations are costly. The fruit sizes well when properly thinned. The flavor is flat, and of poor quality. The fruit is attractive and sells readily on local markets, but few repeat their orders. A number of high quality yellow freestones such as Newday and Sunhigh, are available for this early season, and are much preferred.

**Early Wheeler (Red Bird Cling; Barry Cling).**—This large white cling was introduced in 1906 by E. W. Kirkpatrick of McKinney, Texas. It has long been in demand for its earliness and size. However, its production has not been satisfactory in this test. The fruit also has the bad habit of dropping before becoming ripe, and more than 50 percent of the fruit split at the stem-end under conditions of the test. While the quality of the fresh fruit is poor, it is used for canning. Bestmay is slightly earlier and preferred.

**Eclipse.**—This is another of the New Jersey station introductions. It is a seedling of Belle. The production has not been consistent. It is inclined to be prolific and fails to size its fruit when properly thinned. The quality is excellent and would command a special roadside market trade once the quality became better known. It is too tender to ship. Halehaven is much preferred for the same season.

**E. H. Hendon.**—This is a selection of Indian Cling, and is similar to Moneymaker. Like all Indian Clings, it is in demand for pickling. It is late, and considerable loss occurs from oriental fruit moth.

**Elberta.**—A variety that has stood the test of time, and is still being widely used. In this test, the production has been satisfactory. In some years thinning was necessary to improve size of the fruit. The quality of the tree-ripened fruit is good, but when pulled green the flavor seems to be bitter, even after becoming fully soft.

**Elberta Cling.**—It is supposed to be a cling selection from Elberta, but at Nacogdoches, it has little resemblance to the variety. The flavor is distinct and pleasing. It is much in demand for pickling as the average size is ideal for individual serving. It tends to be prolific and responds but little to thinning.

**Elberta Late.**—In this test, trees of this variety ripened with Elberta instead of later as the name implies. The yield is only fair. The large yellow freestone fruit is attractive, well shaped, and is of excellent quality. It ships well.

**Elberta Supreme.**—This is about three days earlier than Elberta. The fruit is very attractive but has an elongated tip that bruises in the pack. The skin has a tendency to crack after ripening, especially while in the pack.

**El Cling.**—A small white cling that ripens too late for this section. The fruit has remained on the tree well into November, never becoming fit for consumption.

**Engle.**—A small yellow freestone that does not respond to thinning. It follows the Elberta season by three days. The appearance is not pleasing due to its predominating green tinge on the cheek. The quality is good.

**Erly-Red-Fre.**—This is a freestone when full ripe. The flesh is green near the seed, and white with heavy red splashes toward the skin. Its quality is fair. Follows Mayflower by two days. Apparently it has a more moderate cold requirement than does Mayflower.

**Fair Beauty.**—This very attractive, firm fruit is limited for use in this section by its high cold requirement. It is much in demand when crops are produced. Halehaven is three days later, and is much preferred for its dependable bearing habit.

**Fay Elberta.**—This variety is showing a tendency to bloom too early in this section. It has not been under observation long enough to secure seasonal differences. The fruit is well colored, attractive, and of Elberta quality. It precedes the Elberta variety by 10 days and appears promising for this section.

**Fertile Hale.**—This is a shy bearer, like most J. H. Hale in this section. The fruit is very attractive, although it has a slight excess of pubescence. The flesh is yellow to the seed and of excellent quality. It is 10 days earlier than the J. H. Hale, and a week earlier than Elberta.

**Fireball.**—A large white cling that is solid red two weeks before ripening. While the quality is not the best, it attracts attention readily on local markets. It is desired by many for use in pies and preserves. The strong trees ably support a heavy crop that sizes well even when slightly thinned. Brown rot is hard to control on this variety.

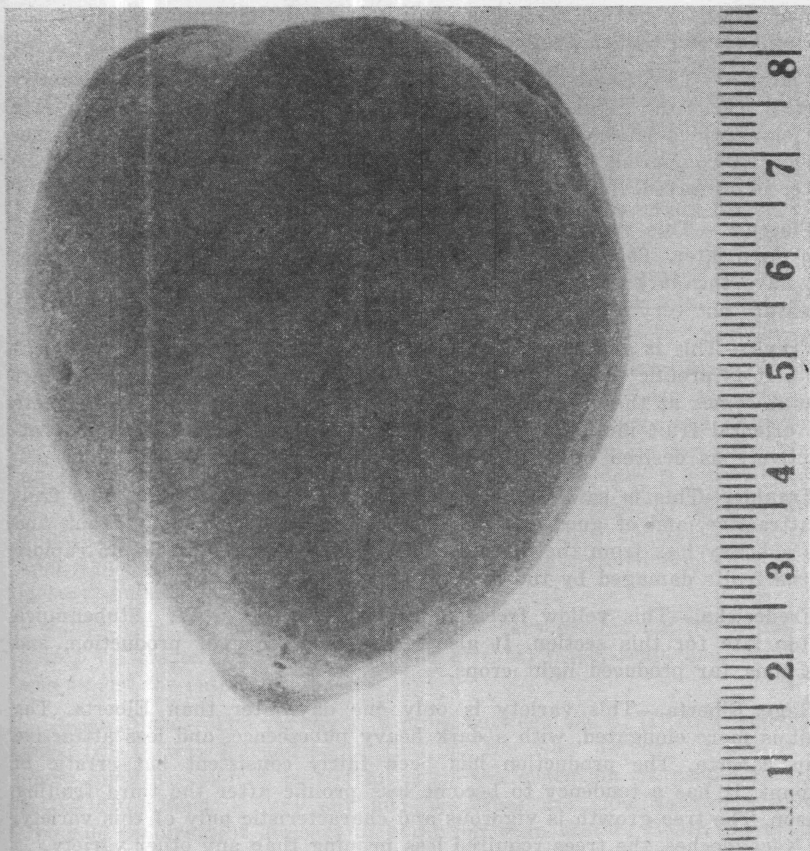


Figure 3. Flaming Gold is an example of the new early yellow freestones. The scale is in centimeters.

**Fisher.**—(U. S. Pat. 233). This variety has proven rather unprolific at Nacogdoches, but has been consistent in producing fair yields. It originated as a bud sport on a Valiant tree on the farm of C. Howard Fisher & Sons, Queenston, Ontario. It was first observed in 1934. The very attractive, yellow-fleshed fruits range from free to clingstone on the same tree, depending on stage of maturity. The quality is good for an early variety and surpasses Arp or Marigold, but is not up to that of Newday or Sunhigh. Except for distant shipment, the latter two varieties are preferable for the same season. Fisher stands up well in the pack and it ships well.

**Flaming Gold.**—The fruit has a large suture bulge, is slightly rough and irregular, but very attractive. The yellow flesh is lightly streaked with



red and is dark red at seed. The quality is good. It is promising for the season between Golden Jubilee and Halehaven.

**Flatonia.**—This South Texas variety sizes its fruit even when heavily loaded. The fruit is attractive with a faint trace of light red beneath the skin, which shows to an advantage in the pack. The fruit is rather tender as compared with Radiance and, being of the same season, the latter is preferred.

**Florence.**—This variety in general is similar to Mayflower, and is only two days later. The flavor is rather sweet for an early variety. It does not have the dark red skin coloring of Mayflower, but is attractive. The trees are not very vigorous. It is inclined to be prolific some seasons.

**Frank.**—This is another of the J. W. Stubenrauch introductions of about 1903. It is prolific to the point that heavy thinning is required. The fact that it comes at the close of the Elberta season makes it desirable where the oriental fruit moth has not become a menace. It fails to color as attractively as desired in this section.

**Frankie.**—This is said to be a freestone seedling of Frank. The fruit is attractive, and of good quality. It is a few days later than Frank and has a heavy loss from the oriental fruit moth. Brown rot sets up rapidly in the fruits damaged by the insect.

**Fredericka.**—This yellow freestone introduction by J. W. Stubenrauch is too late for this section. It also lacks consistency of production, and has thus far produced light crops.

**Gage Elberta.**—This variety is only one day later than Elberta. The fruit is more elongated, with a dark heavy pubescence, and less attractive than Elberta. The production has been fairly consistent but erratic in amount. It has a tendency to become less prolific after the third fruiting season. The tree growth is vigorous and characteristic only of this variety. At Nacogdoches, the trees required less pruning than any other variety.

**General Lee.**—In addition to having an unattractive fruit caused by excess pubescence over a greenish-white background, it is very soft, cracks, and is susceptible to brown rot. The production is only fair. The quality is good.

**George Harris Indian Squaw.**—This variety is not a true Indian Cling. The production was not satisfactory.

**Globe Haven.**—This variety is not as productive as Halehaven, although it has good crops 50 percent of the time. The yellow-fleshed freestone fruit is attractive and is much in demand on local markets. The fruit is firm and will ship. The quality is excellent. It is rather shy on bud-set.

**Golden Beauty.**—Its lack of consistent production and the rather weak tree are the principal objections to this variety. The yellow-fleshed freestone fruit is very attractive and of excellent quality. The fruit packs well and shows to advantage.

**Golden Elbera Cling.**—This is of the same season and closely resembles Stark's Early Elberta. The fruit is very attractive with flesh yellow to the seed, and of excellent quality. A prolonged tip on some of the fruit is slightly objectionable in packing. The trees are vigorous and come into bearing early. The set of fruit buds is generous. The bloom period is short. The date of ripening is nine days earlier than that of Elberta. The fact that it is one of the earliest maturing yellow clings that will ship, should assure it a place to meet the demands for pickling and preserving purposes.

**Golden Dreaan.**—A local introduction. The white clingstone is too late for this section as the season follows Elberta. The oriental fruit moth damage is severe.

**Golden East.**—This was introduced by the New Jersey station in 1937. Trees planted in the Nacogdoches test in 1940 have been vigorous and productive. The fruit is large, very attractive, and packs and ships well. The quality of the yellow flesh is excellent and desirable for either fresh eating or canning. The set of fruit buds is heavy, yet the variety does not show a tendency to be overprolific. It sizes well when moderately thinned. Since it is almost three weeks earlier than Elberta and a week later than Halehaven, the variety can be used extensively. One of the more promising new varieties.

**Golden Gem.**—A late yellow cling that is very prolific but never matured a crop in this test. The loss from the oriental moth, scab, and brown rot was almost the entire set of fruit.

**Golden Globe.**—The variety is a cross between the J. H. Hale and Mari-gold. (4) It was introduced in 1937 by the New Jersey station. It has many qualities desired in a fruit with the exception of production. The set of fruit buds is very shy and the trees are slow to start bearing. The cold requirement appears to be higher than that of South Haven. The use of either Newday, or Sunhigh is preferred.

**Golden Jubilee.**—This was introduced by the New Jersey station in 1926 (1). It is a cross between Elberta and Greensboro. Its main fault is the tendency of the fruit to soften on the tip while slightly green about the stem end. Even so, it has been very much in demand on the local markets and brings top prices at the season. However, with the introduction of Triogem, its popularity should be on the wane as the latter variety is one day earlier and lacks some of the faults of the Golden Jubilee.

**Gold Drop.**—A prolific yellow freestone that ripens two weeks later than Elberta. The quality is poor. The fruit is medium to small, with a prolonged tip. It is too heavily damaged by the oriental fruit moth for use in this section.

**Gold Dust.**—This is a yellow cling that is twelve days later than Frank. Its production has been limited because of damage by the oriental fruit moth and by scab. Either the Stephenson or Frank is preferred.

**Gold Medal.**—The external appearance of the fruit closely resembles Elberta, yet it is five days earlier. The flesh is yellow and stained bright red at the seed. The quality of tree-ripened fruit is excellent. It packs and displays well and is a good shipper. Its dependable production of heavy crops makes it a desirable variety to lead the Elberta season.

**Gold Standard.**—This yellow cling is two days later than Golden Elberta Cling. The trees have been vigorous, but slow to come into bearing. The variety is not very prolific. The fruit is firm, of medium size and attractive. The flesh has good quality, and is yellow to the seed. Due to its production, Golden Elberta Cling is preferred.

**Governor Hogg.**—The fruit has been listed as a cling and semi-cling by some, but at Nacogdoches the tree-ripened fruit is free. The trees are vigorous but light bearers. The fruit ripens the latter part of June, a week later than Mamie Ross. The poor quality, tender fruit, and lack of production makes it undesirable.

**Governor Lanham.**—This variety has produced some fruit each of the six years under test, yet in no season has it had a heavy yield. The fruit is a little dull due to heavy pubescence. The yellow flesh is of good quality and desirable for pickling and preserving. The Golden Elberta Cling is six days earlier and is preferred.

**Griffith Cling.**—It is slow to come into bearing and shy in its production. The trees are moderately vigorous. The fruit is very attractive with a rather heavy suture bulge toward the tip. The quality is excellent. The flesh is yellow to the seed. The seed is large and coarse.

**Halate.**—Production has not been satisfactory during the five-year fruiting period. The fruit is attractive, and of good quality. It has a long, sharp tip that is damaged in the pack. Its low yield and late season makes it undesirable.

**Halberta.**—The young trees are somewhat prolific and size their fruit well during some seasons. The older trees produce poorly and have a noticeable increase of "buttons" (small undeveloped fruits). The fruit is very attractive, of excellent quality, and ships well. The flesh is yellow and heavily streaked with red, and dark red about the seed. Since it is three days later than Elberta, there are a number of yellow freestone varieties that are preferred for their heavier yields.

**Halehaven.**—Introduced by the Michigan station in 1932 (10). It is a cross between J. H. Hale and South Haven. This yellow freestone has proven its value in many plantings through the principal peach sections of Texas. The trees come into bearing early and are productive to the point that heavy thinning is required. The fruit is attractive and colors sufficiently early to permit shipping. The flesh is yellow and has an excessive amount of red throughout, which is objectionable to some for canning purposes. The quality is excellent. The variety can be recommended to follow Triagem and to precede Veteran, Vedette, and Viceroy.

**Hale Early.**—The fruit is somewhat attractive with skin of cream-green, heavily blushed with red. The flesh is of unusual color, a greenish-white and pea green at the seed. The flavor is mild and the quality only fair. A number of better white and yellow varieties are available for the season.

**Hall (Hall's Yellow).**—This is a small yellow freestone of poor quality. The cold requirement is very low. It has no special merit for planting in this section.

**Hardee.**—The cold requirement is high. The yields during six fruiting seasons were not satisfactory. The fruit is large, deep, and rough. The color is attractive. The flesh is yellow and of only fair quality. A few days later than Elberta.

**Hardyberta.**—This is not adapted in this section as its cold requirement is high. The large fruit is rough but attractively colored. It has a wide and deep suture, with halves markedly unequal. A prolonged, slightly crooked tip makes an awkward product to pack. The yellow flesh is of good quality.

**Hart Cling.**—A late white cling that has not been productive in this test. The loss from oriental fruit moth, scab and brown rot has been heavy. The quality is only fair. It is of Frank season, and this yellow cling is preferred.

**Hazel.**—Other than the Candoka, the yellow freestone fruits are considered the most attractive of any variety in the test. The quality is excellent. The production has been erratic during the six fruiting years. Lack of yield eliminates it from the plantings in East Texas.

**Heath Cling.**—This white cling is too late for planting in this area.

**Heidelberg.**—The medium small, dark-colored fruit with extra heavy coating of short pubescence does not meet the buyers' approval in this section. It has a tendency to drop before becoming ripe. It is very susceptible to brown rot. It is prolific some seasons and responds but little to heavy thinning.

**Henderson Elberta Cling.**—It is five days earlier than Frank, but less productive. The large, attractive fruit is firm and of good quality. The flesh is deep yellow and lightly streaked with red. It is considered excellent for pickling and preserving.

**Henrietta.**—This has produced low yields during the five fruiting seasons in this test. The fruit is attractive. The flesh is deep yellow and stained dark red at the seed. It is tart and considered a good pickling peach.

**Hiley.**—This early freestone variety has been extensively planted in this section. It has a low cold requirement, is prolific, and sizes the fruit well when reasonably thinned. It colors well in advance of ripening to permit shipping. The quality is only fair. There is a tendency to replace the variety with Halehaven, which is five days earlier and, being a yellow freestone, is more favorably received by the market.

**Hiley Belle.**—The fruit grown from trees furnished for this variety does not closely resemble either the Hiley or the Belle. Its date of ripening is near the Hiley. The fruit is larger, and attractive in the pack. It is slightly tender for shipping. The quality is good. Radiance is nine days earlier, and better meets the requirements for a white peach of the season.

**Hobson.**—The variety has been reported by Hotchkiss (6) as a cling-stone ripening June 25 to 30, and Brooks (3) reports it as a semi-cling, ripening July 25 to August 15 at Iowa Park. At Nacogdoches the tree-ripe fruit is not entirely free, yet is not considered a semi-cling. The quality is preferable to Radiance, which ripens four days earlier. The Hobson has been a prolific and consistent bearer. It sizes reasonably well under a heavy crop. The attractive fruit does not handle or stand up in the pack as well as the Radiance.

**Honey Special.**—As the name implies, it is a sweet, white-fleshed free-stone. The quality is good for those who like a mild flavor. The trees are willowy, not too strong, and yet support a heavy crop. It is prolific to the extent that drastic thinning is required. The fruit is fairly attractive, stands up well in small containers, and is in demand by those who know its qualities. The low yields as shown in Table 2 are mainly due to incomplete harvest of marketable fruit.

**Hope Farm.**—This is an excellent variety for the home orchard where special interest is centered on a peach of outstanding flavor. The large fruit is not very attractive, and is too tender to pack. Although not prolific, the high yield results from the large size of the fruit.

**Hoy.**—This is a light bearer at Nacogdoches. The trees are only moderately vigorous although apparently healthy. The fruit is attractive with a red blush over a lemon-yellow background. It colors well before ripening. The quality is excellent.

**Ideal.**—The yields are light and trees are not very vigorous. The fruit is of wrinkled appearance, but has an attractive color. the quality is good. Halehaven is eight days earlier and is preferred.

**Illinois.**—The trees are vigorous, prolific and consistent bearers, and heavy thinning is required to size the fruit. The white freestone fruit is slightly stringy and of good quality. There are several desirable yellow freestones for the season.

**Improved Elberta.**—This selection has proven to be less desirable than the regular Elberta. Its production has been both poor and inconsistent. The roundish-oval fruits are easy to pack.

**Improved Victor.**—This variety originated with John B. Bass, Bass, Texas. In this test, the trees were vigorous, produced regular crops, and some years showed a tendency to be too prolific. The fruit responds



to moderate thinning. A slight excess of pubescence reduces its attractiveness in the pack. The quality is fair. Radiance, one day later, is much preferred.

**Jack Bell.**—This variety was originated by Charlie Kidd, Waxahachie, Texas. At Nacogdoches, it has proven to be a very dependable white cling, ripening eleven days earlier than Elberta. The trees are very vigorous and prolific. The fruit sizes well; during years of light fruit sets the size is somewhat larger than desired for pickling. The quality is poor for fresh eating, and the pack is not particularly attractive. The fruit is firm, packs and ships well, and is popular locally for use in preserves and pickles.

**Jackson Elberta.**—This selection has not shown any particular good merits other than being two days earlier than the regular Elberta. Its chief faults are light production and a tendency to drop before becoming full ripe.

**July Gold.**—The material grown under this name closely resembles the Burbank Early July Elberta. The main points of resemblance are the dates of ripening and the color, shape, and quality of the fruit. The trees are somewhat more erect and stronger than the Burbank Early July Elberta, and the dates of bloom differ by a few days. It, too, is prolific. The fruit is firm, packs and ships well, and is of excellent quality. It is of Halehaven season.

**June Elberta.**—This is one of the early yellow clingstones. The yield has not been satisfactory. The fruit is stringy, of only fair quality, and bruises easily. It is not recommended even for home use, as Newday and Sunhigh are only three to six days later, and much preferred.

**June Wax.**—This is an erratic performer. Some years it is prolific to the point that heavy thinning is required. In other years of light fruit set, the size exceeds the largest Halbertas grown in this test. The trees are vigorous and the fruit is attractive on the tree. It is too tender to ship and breaks down rapidly from brown rot. Its flavor is very sweet, and it could be recommended for the home orchard if its production were more dependable.

**J. H. Hale.**—This is a chance seedling found by J. H. Hale, South Glastonbury, Connecticut (5). Of the several strains tested at Nacogdoches, none has had satisfactory production. The color has not been as rich as the Elberta. The trees are strong, but slow growers. The fruit bud set has been shy during most seasons. Due to its several desirable fruit characters, it should be considered for planting in the northern part of the State.

**Kalamazoo.**—This variety originated with J. N. Stearns, Kalamazoo, Michigan. The material grown in this test has many characters that resemble those of the Kalhaven. The trees are moderately vigorous

prolific, and require extensive thinning to size the fruit. The ripening date is a week earlier than Elberta. The fruit is attractively colored well in advance of ripening. It packs and ships well, although some of the fruits have extended tips that are objectionable in packing. The flesh is yellow with a light red stain at the seed. The quality is good, although slightly tart unless full tree-ripe.

**Kalhaven.**—This variety was introduced by the Michigan station. Although it is a prolific and consistent bearer, the production has not been as good as that of the Kalamazoo. The fruit stands up well in the pack but is not attractive, due to irregularity and roughness. Its good color appears well in advance of ripening. The flesh is yellow, but is dark red at the seed. The quality is good. Of the two varieties, Kalamazoo is preferred.

**Katie.**—This is a Stubenrauch variety that has not been satisfactory in this test. The trees are strong and vigorous. It has a light development of fruit buds. The fruit is too late for this section, as the oriental fruit moth and scab materially reduced the yield.

**Kent.**—The excellent quality and texture of this yellow cling, along with a ripening period which follows closely the Elberta season, make it a desirable variety. However, its low and inconsistent yields remove it from the commercial list of recommended varieties for this section. Stephenson of the same season is more productive and is preferred.

**Krummel (October).**—This yellow cling is a light bearer and ripens too late for this section. The fruit is small but very attractive some seasons. The quality is only fair.

**Lagrange.**—This variety has produced poor yields at the Nacogdoches station. The fruit sizes well and is attractive. The flesh is greenish-yellow and stained lightly with red. The quality is good. The trees are moderately vigorous and have been susceptible to winter injury.

**Late Elberta Rex.**—A yellow freestone possessing good quality but too late for this section. In some seasons the coloring is good, in others the fruit softens before color appears. The trees are vigorous, slow to come into heavy bearing, and have a light set of fruit buds.

**Lela Dudley.**—The trees of this variety have been very slow growers, although of sound and thrifty appearance. The fruit bud set has been poor. The bloom period is moderately short. The fruit is large and of good quality, although the flesh is stringy. It ripens 10 days earlier than Elberta. Golden East or Viceroy, which are a week earlier, are much preferred.

**Lemon Cling.**—This variety has been prolific but inconsistent in its fruiting habit at this station. There has been no response to moderate thinning for sizing its fruit. The quality is poor and loss is heavy in some seasons from the oriental fruit moth.

**Lemon Free.**—The fruit of this variety is almost as unattractive as that of the General Lee. Besides being late, the trees are slow to come into bearing and have produced low yields. The fruit drops before becoming ripe as a result of heavy infestation of oriental fruit moth. The quality is poor.

**Leona.**—The variety originated with F. T. Ramsey, Austin, Texas, about 1900. The trees are rather dwarf, although strong and moderately vigorous. It has a tendency to be prolific some seasons. The fruit sizes fairly well under a heavy set and responds very favorably to thinning. The color is good and the fruit is attractive in the pack. The yellow flesh is of good quality, but more tender than Elberta. Leona is a good variety to precede the Elberta season since it ripens a week earlier. The chief objection to the variety is its inconsistency in producing good crops.

**Liberty.**—This is another Stubenrauch origination. The yellow cling fruit is attractive and of good quality. The poor yields and lateness of ripening eliminate it for planting in this section.

**Livingston Beauty.**—This variety is productive but meets the competition of too many good yellow freestones of the same season. Its quality is rated as poor, although it is liked by some for its sweet mild flavor. The fruit is not attractive and bruises easily.

**Lockwood.**—This variety has not been productive at this station. The trees are strong yet subject to winter injury. The fruit is rough and irregular with a long tip. The color is good and the packed product is attractive. The flesh is dark red at the seed and of good quality.

**Luttichau.**—This Honey type white freestone was not productive. A large percentage of its yield was lost through inability to control brown rot. The fruit is unattractive, soft, and bruises easily. The quality is poor, as the flavor has a bitter tinge.

**L. C. Patterson.**—This is an unintroduced seedling that closely resembles the Fireball. The fruit colors dark red two weeks before ripening and is very attractive. The loss from brown rot is heavy. It is desired by many for canning and pies as it is firm for a mid-June peach. The trees are large and strong, and ably support a heavy crop. They have the ability to size the fruit even under heavy fruit set. It is about a week earlier than Radiance and could be used to a limited advantage for roadside stands and local markets. The quality is considered as poor.

**Mamie Ross.**—This variety originated with Capt. A. J. Ross, Dallas, Texas. It has long been well known and popular for use in the home orchard, mainly for its large white freestone fruit that are soft, juicy, and sweet with a tinge of tartness. It is also productive and matures its fruit over a period of more than two weeks. The introduction of several high quality yellow freestones of the same season is gradually pushing the variety into the background.

**Marigold.**—The variety was introduced by the New Jersey station in 1925. It is a cross between Lola and Arp. This is a very early yellow semi-cling that is nearly free when fully ripe. Its quality is good, and the fruit is attractively colored. The trees are weak, and are susceptible to winter injury. The fruit bud set is ample. Newday and Sunhigh are of the season and are preferred.

**Markberta.**—This is an excellent seedling of Elberta; although it is not as productive as its parent, the trees are vigorous and hardy. They have the strength to support a heavy crop and size the fruit during a heavy set. The fruit sizes well under moderate thinning. The color is good and the packed product attractive. It is firm, stands up well in the pack and is a good shipper. The quality is good although a slight astringency is noted.

**Mark-Late.**—This variety is supposed to be five days later than Elberta, yet, at Nacogdoches, it is two days earlier. The trees are strong and vigorous, and of compact spreading growth. The fruit bud set has been a little light. The yields are good because of the large size of the fruit. The fruit is attractive, and uniform in color as well as shape. The packed product is pleasing, and firm enough to ship. The deep yellow flesh is dry in appearance, but of excellent quality. Of the two selections, the Markberta is preferred.

**Markham Cling.**—The trees are not as strong or as consistent in production as desired. It is of the same season as the Stephenson, which is preferred. The fruit of the Markham Cling is attractive with its yellow skin lightly blushed with red. The yellow flesh has a heavy coloring of red at the seed. The quality is good. The firm fruit packs attractively and ships well.

**Markham Jewel.**—This variety has produced only fair yields. The trees are strong, but fail to size the fruit under an average crop. Neither does the fruit respond very favorably to thinning. The fruit is very attractive, of medium size, and firm enough to ship. The yellow flesh is stained light red at the seed. The quality is excellent. The Markberta, which is five days earlier and more productive, is preferred.

**Mary Woodbury.**—The production of this variety has been disappointing as only one heavy crop was produced during four years, although in an earlier report (8), the variety was recommended for use in this section. The quality of this yellow cling is excellent. The season is four days earlier than Stephenson. The fruit is attractive and firm enough to ship. The fruit is too large most seasons for pickling. The pubescence is heavy but not very conspicuous. The trees are large and vigorous. The Golden Elberta Cling is six days earlier, and, although the fruit is not as firm, it is preferred due to its heavy yield and earliness.

**Mayflower.**—This is a variety most sought after by home orchardists in this section as it is the earliest to ripen. Usually the results are dis-

appointing as its cold requirement is high, therefore, a poor yield is obtained most seasons. The fruit is of poor quality and of no use other than eating fresh. The trees are not especially vigorous, are subject to winter injury, and have a high percentage of twig die-back. They are usually short-lived. The Uneeda has been more profitable at Nacogdoches and is much preferred, although eight days later in ripening.

**McDaniel June.**—This variety is prolific and bears good sized fruit. The trees are vigorous and produce a fair crop. The fruit is fairly attractive but too tender for other than home use. The quality is only fair. Newday and Sunhigh of the same season are preferred.

**McDaniel May.**—For two years the variety has fruited nine days earlier than the dates given for Mayflower (Table 2). However, a check with other trees growing locally during these two years show it to be of same ripening date. It is similar in color to the fruit of the Mayflower. The flavor is bitter and the quality poor.

**McDevitt.**—The few fruit produced by this variety were of fair quality and attractive. The cold requirement is high. The trees are strong and upright. Frank is of the same season and much preferred.

**McKevitt.**—The production is very low for this variety. The fruit is a cream-white cling of fair quality and ripens later than the McDevitt. The strong, upright trees have a low fruit-bud set. It is too late for this section.

**Mikado.**—There is considerable controversy about the name of this variety. The name widely used in the South is synonymous with June Elberta. Hedrick, in "The Peaches of New York," reports it as a yellow semi-cling ripening a month later than Elberta. The material furnished for this test by the Allen Nurseries, Geneva, Ohio, ripens with them in August, and is listed as a yellow semi-cling. This lot of trees is obviously neither of the two varieties mentioned above. Since the variety has been profitable in this test, is mostly a freestone, and resembles no other variety in our test, the behavior of the material secured is being reported under this name. The trees are very vigorous, large and spreading, and ably support a heavy crop. They also have the ability to size the fruit well, even under a heavy set. The fruit responds favorably to moderate thinning. The color is good, and makes an attractive pack. The flesh is lightly streaked with red adjacent to the seed. The quality is good to excellent. It is firm and ships well. It is four days earlier than Elberta.

**Minnie Stanford.**—This has produced one heavy crop out of six years. The yield has been consistent, but too light for profit. The trees are large and vigorous. The fruit is large and tends to shed before becoming fully ripe. The color is solid yellow and not highly attractive in the pack. The flesh is of good quality and is excellent for preserves. It has previously been reported as a yellow freestone (7). Stephenson is earlier and is much preferred.



**Moneymaker.**—This is a yellow-fleshed Indian Cling. The external markings of the fruit are typical of the Indian Cling. It has not been productive in this test, the yields being reduced each season by the oriental fruit moth damage. There are other typical Indian Clings that are earlier and preferred to this one.

**Montopolis.**—This variety ripens in the midst of a large number of desirable yellow freestones. It is eight days earlier than Elberta. It is supposed to require less cold than other varieties. The trees are large and vigorous. They can support a heavy crop and size the fruit well. The fruit sizes under moderate thinning. The large, attractive, white fruit is heavily blushed with bright red. It colors sufficiently in advance of ripening to permit packing and shipping. Its quality is good, and is excellent for use where the trade demands a white freestone of that season.

**Moore Elberta.**—This is a seedling selection of Elberta that does not meet the standard set by its parent.

**Mountain Rose.**—The variety is similar to the Mayflower in fruit and tree characters.

**Muir.**—This is a low yielder in this section. The fruit is large, rough, and poorly colored. The packed product is unattractive due to a greenish-lemon color. It is of the Elberta season.

**Newday.**—A recent introduction by the New Jersey station. It is a cross made of Hale and N.J. 40 CS. Although it has only fruited two seasons in this test, it is felt that the variety has helped to fill a great need for a high quality yellow freestone ripening the first 10 days of June. The trees are vigorous, and upright with a tendency to be slightly willowy. The fruit bud set is heavy, yet excessive thinning is not required. The fruit sizes well under ordinary thinning practices. The color is very good and appears sufficiently early to permit packing for trucking. However, the tree-ripened fruit must be handled carefully as it is tender and shows picking bruises within 24 hours. The flesh is yellow and heavily streaked with bright red. The quality is good. Reports from one season are favorable on its merits as a canned product.

**New Honey Dew.**—This large white freestone is an excellent choice for the home orchard where size and sweetness are first considerations. The large vigorous trees are prolific and consistent in production. The yield is good. The large fruit is tender, susceptible to brown rot, and breaks down easily in the pack. The flesh is stringy, but sweet and juicy, and of good flavor.

**New Prolific.**—This has not been profitable in this test, as the yields have been both low and inconsistent. The fruit is irregular and rough, but of good color some seasons. The quality is only fair.

**October Beauty.**—Fruit of this variety that escapes the oriental fruit moth is very attractive and comes at a time when prices are excellent.

The yellow flesh is firm, and of good quality. The trees are large and vigorous. The fruit bud set is heavy and excellent crops are usually made. This is a good late yellow cling where the oriental fruit moth is not a problem.

**Olle.**—The trees are spreading but dense, and of good vigor. They are prolific, and bear heavily. The fruit is small, of a very dark red that is not attractive. The flesh is a bright reddish-white and is of low quality. It breaks down on the tip like Golden Jubilee. It is not popular on local market.

**Oklaberta.**—A large Elberta-like fruit, but two days earlier. The variety has a high cold requirement. The fruit bud set is shy and the yields very low. It is not recommended for this section.

**Orange Cling.**—Yield has been good during the five fruiting years. The trees are strong and vigorous but fail to size the fruit. Heavy thinning has little effect on fruit size. The firm, attractive, yellow clingstone fruit is of proper size for pickling, and is in demand locally for this purpose. It tends to drop before it becomes ripe enough for dessert or fresh eating. It colors well in advance of ripening and can be shipped. Golden Elberta Cling is six days earlier and is generally preferred.

**Oriole.**—Introduced by the New Jersey station in 1925. It is a cross between Slappey and Dewey. The trees are upright and vigorous. Yields are good, although not as heavy as Golden Jubilee, which is of the same season. The fruit is semi-cling to free when full ripe. It is not very attractive and is too tender for shipping. Golden Jubilee is preferred.

**Pallas.**—A Honey type that has 90 percent of the fruit cracked during wet weather. The fruit is too small and tender for commercial purposes. The quality is poor. It is extremely susceptible to brown rot.

**Payne Beauty.**—This is another mid-season white freestone that has little to offer in the face of the competition from a large number of yellow freestone varieties. The fruit is small, rough, and tender. The color is poor. The flavor is sweet to flat. It is susceptible to brown rot.

**Phillips Cling.**—This famous variety in California is not adapted to conditions in East Texas. The yields are very low. It is too late for this section, as the oriental fruit moth damage is severe. The trees have also proved to have a limited set of fruit buds.

**Pioneer.**—This is another of the Belle and Greensboro selections which was introduced in 1925 by the New Jersey station. Yields have been good. The trees are vigorous, spreading and support a heavy crop. The fruit sizes well. The fruit is not particularly attractive, as the short stiff pubescence dulls its appearance. It is not popular on the local market as picking bruises appear and soon tend to spoil the packed product. Anna of the same season is preferred.

**Polly.**—This attractive white freestone is of poor quality and has only fair yields. The trees are strong and vigorous. The fruit bud set is light. For the season, Montopolis is preferred for local markets, and New Honey Dew is preferred for the home orchard.

**Primrose.**—This is a cross between Belle and Elberta. It was introduced by the New Jersey station in 1925. This variety has been consistently productive, with heavy crops four out of five years. The trees are spreading and vigorous. It is inclined to be too prolific some seasons and requires heavy thinning. The fruit size is medium under normal thinning. Excessive pubescence is one of its main faults, which can be overcome where defuzzing machines are available. The fruit is firm, stands up well in the pack, and ships well. It is attractive. The yellow flesh is lightly dotted with red and with considerable red at the seed. The quality is good. It leads the Elberta season by a week.

**Radiance.**—The variety is a cross between Belle and Greensboro. It was introduced by the New Jersey station in 1925. The large white freestone fruit of this variety is richly colored with a red blush. Its appearance in the pack is so pleasing that it sells with any of the yellow varieties. It is of the Halehaven season. The fruit colors well in advance of ripening, which permits shipping. The flesh is lightly streaked with red through to the seed. The quality is good but slightly more tart than the Cumberland, which it follows by four days. The trees are upright, strong, and very vigorous. They ably support a heavy crop and size the fruit well. The fruit bud set is generous, yet it is not considered to have undue prolificacy. It is earlier than Hiley and preferred to it.

**Raritan Rose.**—Introduced in 1936 by the New Jersey station. This is a cross of J. H. Hale and Cumberland. At Nacogdoches, it is 11 days earlier than the latter parent. The fruit is medium to large, attractive, and well colored in advance of ripening. It is doubtful if it can be shipped to northern markets but it can be trucked short distances. A prominent suture bulge ripens first, and care must be used in avoiding fully ripe fruit in the pack. The trees are upright but somewhat willowy and vigorous. The quality is considered good for an early white freestone. The Raritan Rose must compete with Newday, Sunhigh, and Early Halehaven, three very promising yellow freestones of the season.

**Rater No. 1.**—The trees have not been especially thrifty in this test. Another fault of the variety is that it ripens its fruit over a very short period. The yellow flesh is of excellent quality and is heavily splashed throughout with an attractive dark red, but is yellow at the seed. The season is that of Halehaven.

**Redelberta (U. S. Plant Pat. 232).**—This bud sport of Elberta is two weeks earlier than its "parent." While it is prolific, the trees are not as vigorous as Elberta nor as consistent in production. The fruit is very attractive, well colored with red outside, ranging from bright to dark, before ripening. The flesh is yellow with light red throughout and about the seed. It stands up well in the pack and ships well. The quality is excellent.

**Red Hale.**—This variety was slow to come into bearing, but in this test the yield materially increased by the third fruiting season. It deserves a longer period of observation. The trees are sufficiently vigorous to support a good crop. The fruit is large, irregular, and rough, but attractively colored, and presents a good appearance in the pack. The quality is only fair. It is a good shipper.

**Redhaven.**—This variety has not produced in this test the results reported from other sections. The trees are weak, slow growers, and low in production. The yellow freestone fruit is only fair in quality, tender and watery. This is a recent introduction of the Michigan station.

**Red River.**—A late white cling that is fairly attractive. It has no special merit other than for pickling. Jack Bell is much earlier and is preferred for the same purpose.

**Rio Oso Gem.**—This has been consistent in producing moderate crops. The trees are slow growers, and can support a heavy crop. Some seasons there is a tendency to be too prolific, and heavy thinning is required. The fruit sizes well with ordinary thinning. A portion of the yield is reduced as a result of oriental fruit moth damage. The fruit is very attractive, colors well 10 to 14 days before ripening. It is firm, stands up well in the pack and ships well. A good variety to follow Elberta where the oriental fruit moth is not a factor.

**Rochester.**—This is not popular in this section due to its excessive pubescence and dark red fruit. The foliage is unusually susceptible to arsenical injury. The trees are large, vigorous, and productive. It is prolific to the extent that heavy thinning is required. The quality of the yellow flesh is good. Halehaven, of the same season, is preferred.

**Rosebud.**—This is one of the New Jersey station introductions of 1925. It is a cross between Carman and Slappey. The fruit is small, of poor appearance in the pack, and breaks down easily. It is susceptible to scab. The quality is only fair. Uneda, of the same season, is preferred.

**S. A. Childs.**—An unintroduced selection. It is a yellow freestone of Elberta season. The tree and fruit characters have no outstanding merit that would justify replacing any of the existing varieties.

**Salberta.**—This is a cross of Salwey and Elberta. The trees are large, dense-topped and vigorous. The variety is not prolific, yet it is consistent in producing fair crops. The fruit is large and attractively colored. The flesh is yellow and lightly stained with red-yellow at the seed. The quality is good. The flesh texture is excellent for canning. The season is the same as that of Elberta.

**Salwey.**—This old variety was introduced from England. The trees are large, strong and vigorous. It is very prolific, and fails to size the fruit when properly thinned. The fruit is not attractive. It is too late for this section. Some like this dry-fleshed yellow freestone fruit for drying.

**September Elberta.**—This refused to fruit satisfactorily in this test. The few fruit secured were of poor quality and heavily infested with oriental fruit moth. It is of no value in this section.

**Shafter J. H. Hale.**—Its production has been typical of most of the J. H. Hale selections. The fruit is large and very attractive. It colors well in advance of ripening. The round type fruit pack and ship well. Its quality is considered excellent, and superior to J. H. Hale and its other selections.

**Shalil (P. I. No. 63852).**—An introduction of the United States Department of Agriculture. The variety is recommended as being nematode resistant. The production was relatively light each season, due largely to loss from the oriental fruit moth. The trees are vigorous with a heavy set of fruit buds.

**Shippers Late Red.**—It is three days earlier than the Elberta, which it resembles very closely. The trees are strong, prolific, and size the fruit well under ordinary crops. The fruit is firm, and packs and ships well. The quality is good, although the slightly stringy flesh has a trace of astringency. This flavor is rarely noticed in tree ripened fruits.

**Short.**—Originated by J. A. Evans of Arlington, Texas. The trees are among the thriftiest in the test. They are strong and can support a heavy crop. The fruit bud set some seasons is light. The fruit is well colored and attractive, with a dark red blush over the red-streaked yellow skin. The flesh is streaked lightly with red and is bright red at the seed. It is slightly stringy, although of good quality. It ripens with Elberta.

**Silver Medal.**—This variety has many characters that are similar to the Jack Bell. It is said to have originated near Shreveport, Louisiana, about 1900. It was awarded the Silver Medal at the World's Fair at St. Louis in 1904. The large white cling fruit is 10 days earlier than Elberta. It colors enough in advance of ripening to permit shipping. It is in demand for pickling and preserving. Since Jack Bell is of the same season and more productive, it is suggested for use in this section.

**Slappey.**—This variety has been erratic in production in this section. During seasons of heavy fruit set, it requires excessive thinning. The fruit is small as it fails to respond to the usual thinning. An elongated, cone-like tip is objectionable, as it softens first and bruises while being picked. The quality is only fair. Preference is given to Halehaven, which is six days earlier.

**S. M. Cain.**—This is a yellow cling that is too late for this section. The yields have been materially reduced by oriental fruit moth. The fruit is attractive. The flesh is yellow and of good quality. Its main fault is the dropping of fruit before becoming ripe enough for pickling and preserving.



**Sneed.**—This early white clingstone is of no value in this section. The flesh is tough, stringy and watery. The quality is poor. The fruit drops before ripening and is very susceptible to brown rot. Uneeda is a little earlier and is preferred.

**South Haven.**—This variety originated on the A. G. Spencer farm near South Haven, Michigan, as a bud sport of St. John. It is two weeks earlier than Elberta. It has a high cold requirement, consequently, some seasons the fruit bud set is limited. The trees are large, compact, and strong. The fruit sizes well and is attractive. The flesh is yellow with light trace of red at the seed. The quality is excellent. Lack of consistent production is the only reason for withholding it from the top of the recommended list.

**Stark's Early Elberta.**—This variety originated with Dr. Summer Gleason, of Kaysville, Utah. Its production has been very satisfactory in this test. The trees are spreading and vigorous. They ably support a heavy crop. The fruit bud set is generous most seasons, but it is not considered a very prolific variety. The fruit does not color as much as desired, especially following a rainy period prior to ripening. The general color is solid yellow. The flesh is lightly streaked with red from the seed to about halfway to the skin. The quality is good. The fruit has been rather tender for shipping. It is very much in demand for canning by those who know it.

**Stephenson.**—Originated by J. A. Evans of Arlington, Texas. Stephenson is a yellow cling that ripens sufficiently early to escape the oriental fruit moth. It follows the Elberta by one day, which results in heavy competition from the yellow freestones. The large, well-shaped and attractive fruit deserves and holds its place in the market. The flesh is yellow almost to the seed, and of excellent quality. It is firm and packs and ships well. The variety has a high rating as a frozen product. The trees are strong and vigorous. It is considered one of the best yellow clings.

**Stinson (October).**—This variety is a very late white cling. It is prolific in the set of fruit, but no yields were obtained as a result of damage by scab, brown rot and the oriental fruit moth.

**St. John (Yellow St. John).**—The fruit is small, rough, and irregular. The packed product is not pleasing, and fails to sell well. It has an excess of pubescence, and is very susceptible to brown rot. The quality is only fair.

**Stoker No. 2.**—This is a large white cling of early June that has shown no special merits for this section. The fruit is of medium size, and is not attractive. The flesh has a dry crystalline appearance and is white at the seed. It is heavily streaked with red from the skin half way through to the seed. Its quality is only fair. The trees are large, strong and vigorous.

**Stolle.**—The fruit is small, very rough and irregular, with an extra long tip. The greenish-red skin is unattractive. The quality is poor.

**Stump.**—This ripens during the Elberta season. The fruit is rough with a dull, dark red blush. The flesh is lightly streaked with dark red. The quality is fair. The trees are not very vigorous, are inclined to be open, and fail to support a heavy crop properly. There are a number of varieties of this season which are preferred.

**Summercrest.**—Introduced in 1938 by the New Jersey station. It is a cross between J. H. Hale and Cumberland. Under fertile soil conditions the trees grow very rank and require heavy pruning. The fruit bud set is generous, and it promises to be a prolific variety in this section. During periods of excessive rainfall the fruit has not colored well. The yellow-blushed fruit ordinarily is attractive in the pack and stands handling. The flesh is yellow to the seed and has good quality. The variety promises to fit well into the season between Golden East and Elberta.

**Sunbeam.**—The variety is a cross between Slappey and Dewey. It was introduced in 1925 by the New Jersey station. This early yellow semi-cling is very popular and much in demand on local markets. The fruit is attractive, shows well, and remains firm in small packs. It is too tender to ship. The flesh is yellow almost to the seed. Although the quality is considered only fair, the flavor is superior to some of the white-fleshed varieties of the season. The trees are not especially vigorous. It is prolific to the extent that excessive thinning is required if good size of fruit is obtained.

**Sungold.**—This variety has been very prolific and fairly consistent in its production at this station. It is prolific to the extent that heavy thinning is sometimes required. The fruit responds favorably in sizing to moderate thinning. The trees can support a heavy load, although not considered to be vigorous or strong. The fruit is well colored, and in some seasons has an excess of red. The flesh has a light sprinkling of red throughout. The quality is excellent. The fruit is attractive in the pack and ships well. Its chief fault appears to be a tendency to go dormant during a dry period of the summer and then to start blooming after the fall rains set in.

**Sunhigh.**—Introduced by the New Jersey station in 1938. It is a cross between Hale and N.J. 40 CS. Like Newday, the fruit is ripe in early June when the demand is strong for a good quality freestone for use in desserts, ice cream, and for eating out of hand. The fruit is well colored and very attractive in the pack. Tree-ripened fruit must be handled with care as picking bruises appear early. The trees are strong, support a heavy crop and have the ability to size the fruit well. An excellent early variety for this section.

**Surprise.**—This is a very late white cling that, even when allowed to remain on the tree well into November, has never produced usable fruit. Ordinarily, the majority of the fruit drops in September and October from damage of the oriental fruit moth, scab and brown rot.

**Sunglow.**—This variety ripens a full two weeks later than Elberta. It is slow to come into full bearing and has a high cold requirement. A desirable freestone to follow the Elberta if grown farther north, and where the oriental fruit moth is not a problem. Another variety termed "Sun Glo" has been reported as a selection of the South Haven and ripening a week to ten days ahead of Elberta.

**Tena.**—This is another of the Stubenrauch originations. A yellow freestone of the Elberta season. The trees have been productive, consistent in seasonal yields and relatively strong. During some seasons there is a tendency to overload, therefore, moderate to heavy thinning being necessary to secure size. The fruit is attractive, ships well and shows to an advantage in the pack. The flesh is yellow and lightly stained with red half way to the seed, and dark red about the seed. The quality is excellent.

**Texaberta.**—In the test, this variety has been rather consistent in bearing light to good crops. It has a tendency to be too prolific some years. The trees are vigorous with a moderate set of fruit buds. The fruit sizes well, stands up in the pack, and can be shipped. During seasons of excessive rainfall there is a lack of red coloring that gives a dull appearance to the pack. The quality is good, and has a sweet flavor with a trace of tartness. The ripening date is 10 days earlier than Elberta. Redelberta and Stark's Early Elberta are of the same season and have been more productive.

**Texas King.**—This white freestone variety ripens a week later than Radiance. The trees of the Texas King have not been long-lived in this test. The yields are not heavy. The fruit has good quality when tree-ripened.

**Triumph.**—This closely resembles Rochester and Admiral Dewey, and is of about the same season as the latter variety. The fruit has an excess of pubescence, and is unattractive and tender. Yields are moderately light, due to heavy loss from brown rot. The trees are strong, upright and very prolific. Triogem is much preferred for this early season.

**Triogem.**—This is a cross between J. H. Hale and Marigold, introduced in 1938 by the New Jersey station. It is proving to be a very desirable yellow freestone to ripen between Newday and Halehaven. The trees are strong, upright with a tendency to spread and size a heavy crop. The fruit bud set is generous, yet it is not considered to be a highly prolific variety. The fruit is medium in size, and responds favorably to moderate thinning. The color is excellent for display in both small and large packs. The fruit ripens slowly and can be harvested for shipping several days before fully ripe. The yellow flesh is slightly streaked with red throughout. The quality is good. Triogem appears to have a definite place in the orchards of this section.

**Tuscan Cling.**—The production of this variety has been disappointing. There is a large percentage of the fruit formed as "buttons" or "little

peaches." The fruit size ranges from small to large within the same season. It is a rough and unattractive fruit that will not stand up in the pack on the local market. Other varieties of the same season, such as Golden Elberta Cling and Governor Lanham, are preferred.

**Unedda.**—This variety is an early white cling of only fair quality. The flesh is slightly stringy, and has an astringent flavor. It is too tender to ship. For local markets and roadside stands, it is considered to be one of the most profitable of the varieties tested. This is because of six good crops produced out of eight fruiting seasons, and because of its roundish reasonably well-colored fruit that is attractive in the small pack. The trees are vigorous, strong, with a tendency to be willowy, yet able to support a heavy crop. The fruit bud set is excellent. The orchardist must know his local demand for fruit of this type or he will overplant.

**Upshur County.**—An Elberta selection that ripens two weeks earlier. The selection has not been observed long enough to determine its production over a period of years. The trees are upright and vigorous. It is slow to come into full bearing. The fruit is attractive and of Elberta flavor. Until it proves itself, either Redelberta, Summercrest or Viceroy are preferred for the season.

**Valiant.**—Along with Vedette, Veteran and Viceroy, this is an origination of the Vineland Station, Ontario, Canada. Of the four varieties, Valiant has had the lightest production. The trees are spreading and vigorous. The fruit bud set is light most seasons, with considerable blind budwood. The color approaches the Vedette in attractiveness. During some seasons there is a tendency for the tip to be rather long. The flesh is yellow with a light stain of red about the seed. The quality is comparable to Veteran, which is considered to be of the best. The fruit is firm and ships well. Lack of heavy production under conditions in East Texas appears to be its outstanding fault.

**Vedette.**—Unlike Valiant, Vedette is prolific to the point that thinning is expensive some years. The trees are strong and size the fruit well when properly thinned. The fruit is well-colored several days in advance of ripening and can be shipped. It makes a very attractive pack. The flesh is yellow with only a light stain of red at the seed. It is slightly stringy. The quality is excellent. Its yielding ability makes the variety worthy of a place in the plantings of this section.

**Veteran.**—In production, Veteran ranks third of the four "V" varieties. The trees are upright, strong and size their fruit well. The fruit bud set is light some seasons, with a tendency each season to produce considerable blind budwood. The fruit is roundish and makes a pleasing pack. The color is not as rich as either the Valiant or Vedette. The quality has been rated by many to be superior to any of the varieties tested. The New Jersey station introduction, Golden East, is a worthy competitor of Valiant, Vedette and Veteran, and it remains to be seen which of the four survive in this section.

**Viceroy.**—The fruit is inclined to be a semi-cling. However, the cling tendency disappears when the fruit is tree-ripened or allowed to soften in the pack. The trees are large, vigorous, and spreading. It yields more than Vedette. The trees are inclined to be prolific. They can support and size a heavy crop. The fruit is firm, fine-grained and very attractive. The flesh is solid yellow with a light red at the seed. Its quality is good, but not comparable to Veteran.

**Viola.**—This was among the most promising varieties during its first three crops. However, the yields declined after the third fruiting season, although the trees remained strong and vigorous. It leads the Elberta season by three days and has proven to be a good shipper. It is popular on local markets for its canning and dessert qualities. Its quality is rated as excellent. The yellow flesh is lightly stained with red throughout. The packed product is pleasing as the fruit colors well several days in advance of ripening.

**Vivid Globe.**—This is very similar to Halberta in growth of tree, and in size and color of fruit, but it matures six days earlier. Its production has been low due largely to lack of fruit buds. The fruit is large, richly colored, firm and ships well. The flesh is stringy unless fully ripe. Lack of production is one of the main objections to the variety.

**Wahlbert.**—The trees are thrifty, and very prolific. The willowy limbs support a heavy load. A heavy thinning is required to secure desired size of fruit. The excessive pubescence dulls the appearance of the dark red fruit. There is considerable loss of fruit from brown rot. The flesh is streaked with dull red near the skin, and with bright red near the seed. The quality is poor. A number of desirable varieties are available for its season.

**Watson Climax.**—This variety is of the Early Wheeler season. Trees are vigorous and prolific. Yields have been light, due mainly to heavy infestation of brown rot. The fruit is nearly round, with a solid dark red skin. The flesh is white and heavily stained with red, except near the seed, which is greenish-white. The quality is fair.

**Welcome.**—This has not been productive in the test. The trees are large and thrifty. The yellow freestone fruit is large, well colored and attractive. The fruit of 1945 was larger than that of either Halberta or Vivid Globe. The variety is two days later than Elberta.

**White Hale.**—This is a cross between J. H. Hale and Belle. It was introduced in 1932 by the New Jersey station. It is a large, white free-stone of unusual flavor. The quality is good with a sweet lingering taste in some fruit, while others show a trace of tartness. The fruit is heavily blushed with red well in advance of ripening, and offers the possibility of shipping. However, nearly ripe fruit must be handled with care in packs for local markets. The packed product is not highly attractive. The trees



are strong and thrifty with a generous set of fruit buds. Since the variety ripens during the Elberta season, it is doubtful if it should be planted except for a special market.

**Whitton Cling.**—This is a round, white cling that has no special merits to justify its use. Other varieties of the same season such as Stephenson and Elberta Cling, provide a high quality yellow cling much preferred for preserving and pickling.

**Williams.**—This variety has been consistent in setting good crops but failing in yields due to heavy loss from oriental fruit moth. The fruit is well-colored, firm and attractive in the pack. The quality is only fair as a trace of astringency prevails. The trees are slow growers, but strong and thrifty. The variety offers possibilities for following the Frank season where the oriental fruit moth is not present.

**Wilma.**—This is a yellow freestone that is two days earlier than Elberta. The fruit is of medium size and has a lemon yellow skin with a dark red blush. It is only fairly attractive. A prolonged tip some seasons proved to be a detriment in packing. The flesh is lemon yellow, stained bright red at the seed. The fine-grained flesh has good quality. The trees are spreading, vigorous and can support a heavy crop. The fruit bud set is generous, yet a minimum amount of thinning is required.

**World's Earliest.**—This is a very early white cling of poor quality. It is not as well colored as Mayflower. The fruit is inclined to drop before it ripens. The flesh is tough, yet will not stand up in the pack. It is not recommended for this section.

**Yellow Hiley.**—This variety bears no resemblance to Hiley as grown in this test. The date of ripening is three weeks later than Hiley. It is of the Elberta season. The fruit is medium-sized, with heavy pubescence. The skin is highly colored with a dark red blush over a greenish-yellow background. The yellow flesh is lightly streaked with red. The quality is good. It is tender in the pack even for local markets. Other yellow-fleshed varieties of the season are more desirable.

**Yunnan (P.I. 55885).**—The three following Yunnan selections are U. S. Bureau of Plant Industry introductions from Yunnan, China. The primary purpose of placing them in the test was to observe their yields. Each is recommended as being resistant to nematodes. This selection is a white cling that has become popular for pickling purposes, mainly due to its small fruit and seed. Its production has been good.

**Yunnan (P.I. 55886).**—The production of this selection is too low for seed purposes.

**Yunnan (P.I. 55888).**—The flesh of this selection is yellow. Its production is not as satisfactory as P.I. 55885.

## SUGGESTED VARIETIES FOR EAST TEXAS

There are three principal types of orchards to be considered when recommending a list of peach varieties, namely, the home orchard, plantings of several acres for supplying roadside stands and nearby markets, and large plantings where interest lies mainly in shipping to distant markets.

### Varieties for the Home Orchard

The home orchardist is interested in serving the earliest peaches of the season as well as having available a continuous supply throughout late May to the middle of August. These must be high quality white and yellow freestones for fresh eating, dessert, and canning purposes. There must also be some firm white and yellow clings for pickles and preserves. A planting of the following varieties will cover these requirements (dates are first ripe): *May 20-31*, Mayflower; *June 1-10*, Newday, Sunhigh and Bestmay; *June 11-20*, Anna, Cumberland, Golden Jubilee and Triogem; *June 21-30*, Burbank Early July Elberta, Golden East, Halehaven, Radiance, Veteran, Valiant and Viceroy; *July 1-10*, Jack Bell, Honey Special and Redelberta; *July 11-20*, Belle, Elberta and Stephenson; *July 21-31*, Frank.

### Varieties for Roadside Stands and Near-by Markets

The commercial orchardist has a large number of requirements to meet to fulfill the demands of these two markets. First, the flow of fruit must be continuous to hold the interest of the buying public; second, the produce offered must be attractive and of high quality, and third, a number of varieties must be offered to meet the demand for the different types of fruit as the season advances. Naturally, the orchardist is primarily interested in heavy yields of a peach that will move and stand up in the containers.

The following list of varieties has been selected to meet these requirements (dates are first ripe): *June 1-10*, Bestmay, Newday, Sunhigh, Early Halehaven and Uneeda; *June 11-20*, Anna, Cumberland, Golden Jubilee, Flaming Gold and Triogem; *June 21-30*, Burbank Early July Elberta, Golden East, Halehaven, Radiance, Veteran, Valiant and Viceroy; *July 1-10*, Golden Elberta Cling, Jack Bell, Redelberta and Vedette; *July 11-20*, Brackett, Elberta, Gold Medal, Markberta and Stephenson; *July 21-31*, Barbara, Chilow and Frank.

### Varieties for Shipping

There is a growing tendency of the orchardist to extend his shipping season. Therefore, he has in the main to look for varieties ripening before the Elberta season, since those maturing much later are heavily damaged by the oriental fruit moth.

The following list of varieties has been selected for their productiveness, and firmness, while maintaining high standards of appearance and quality (dates are first ripe): *June 1-10*, Newday and Sunhigh; *June 11-20*, Triogem; *June 21-30*, Burbank Early July Elberta, Golden East, Halehaven and Viceroy; *July 1-10*, Vedette and Redelberta; *July 11-20*, Brackett, Elberta, Gold Medal, Markberta and Stephenson.

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